

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.
SECOND QUARTO SERIES, VOL. X., No. 19] SATURDAY, MAY 13, 1854. [WHOLE No. 943, VOL. XXVII.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

PRINCIPAL CONTENTS.

Field Book for Railroad Engineers,.....	289
Railroad Equipments,.....	289
Tunnel on the Pennsylvania Railroad,.....	290
Pennsylvania Railroad,.....	295
Journal of Railroad Law,.....	291
Hollow Axles,.....	292
Savannah Valley Railroad,.....	292
Bellefontaine and Indiana Railroad,.....	294
Area of the United States,.....	295
Old Colony Railroad,.....	295
Statistics of Maine Railroads,.....	295
Wabash and Erie Canal,.....	295
Cincinnati, Peru and Chicago Railroad,.....	295
Henderson and Nashville Railroad,.....	295
Stock and Money Market,.....	296
Iron Bridges,.....	298
Railroad Runners,.....	299
Lake Shore Railroad,.....	292
Mississippi and Atlantic Railroad,.....	298
Erie Canal,.....	299
New Orleans, Jackson & Gt. Northern Rail'd,.....	299
Dayton & Michigan Railroad,.....	300

American Railroad Journal.

Saturday, May 13, 1854.

Field Book for Railroad Engineers.

Containing formulæ for laying out curves, determining frog axles, levelling, calculating earth work, &c., &c., together with tables of radii, ordinates, deflections, long chords, magnetic variations, logarithms, logarithmic and natural sines, tangents, &c., &c.—By JOHN B. HENCK, A. M. Civil Engineer.—New York,—D. Appleton & Co., 1854. 12mo. pp. XV. 243.

The title of this book gives a good synopsis of its contents. It is small, bound in a pocket book form, and readily carried in the pocket. The lithography is remarkably neat and clear, the paper good, but thin in order to diminish the bulk of the volume.

The treatise presents one of those rare instances in which a thoroughly scientific theory is applied in an eminently practical and common sense way. Mr. HENCK's acquaintance with pure mathematics is sufficient to enable him to handle in an original way the most difficult problems presented to him, and his extensive experience in the field, leads him to put his results into such a form as will be

most readily available and capable of most rapid calculation. In addition to the subjects which one would naturally expect to find handled in a book with the above title page, we have a discussion of the parabolic curves said to be in such repute among French engineers, of the vertical curves necessary in passing from one grade to another, of the proper elevations of the outer rail on curves, and of the coning of wheels. Also tables of expansion by heat, properties of materials, of valuable miscellaneous formulæ, and of squares, cubes, square roots, cube roots, and reciprocals. The tables alone, if republished in a separate volume, like Blunt's edition of Bowditch's useful tables, would be a valuable treasure to civil engineers in every department, and also to architects, machinists, and all persons engaged in practical calculations. We believe indeed that with a few pages of examples for practice these tables, would be a valuable text book for high schools.

The whole treatise reminds us of Bowditch's practical Navigator, and seems to us destined to hold the same rank with Railroad engineers that the Navigator holds among shipmasters. The superiority is on the side of Mr. Henck's book on account of his rules being given in algebraic formulæ.

This may be thought an objection by those Assistant Engineers (unfortunately too numerous) to whom algebra is not a familiar language. But on examination they will find that the formulæ are very easily comprehended even by those who cannot follow the demonstration, which the condensation of the rules into formulæ enables Mr. Henck to insert. If this treatise becomes the indispensable *vade mecum* of every Assistant Engineer it will be of great service to the intellectual character of the profession as well as a great means of diminishing their labors.

We would offer but one adverse criticism, which is a passage in the preface, in which Mr. Henck expresses a wish to render a resort to "fudging" inexcusable. With all deference to Mr. Henck, we conceive that *fudging* is in many cases a legitimate, nay a necessary process. Instead of pouring contempt upon it, he had done better to have given a short chapter, showing when and how to use it. We suppose that by *fudging* he means *guessing and trying*. Now this is the legitimate

occupation of a finite mind, whether in politics, trade social life, or science. When there is no certainty make the best guess you can, and test the hypothesis by trial. This is the best advice that can be given on every subject. In arithmetic it takes the form of the rule of double position, an invaluable rule, strangely neglected in our modern school arithmetics.

But perhaps the author did not intend to condemn fudging in the sense of legitimate "guessing and trying," that is, when this is the only or the best process. He may have understood by "fudging" those botching and make-shift operations which are so often witnessed as the result of ignorance or want of time to devise correct methods on the spot. In this case we heartily agree with him, and are willing to part company with such "fudging" as soon as possible.

Railway Equipments.

There are many practical considerations which influence the selection of railroad equipments. Price is by no means the most important. In the purchase of a house, a watch or a horse, there is not expected to be an expenditure nearly equal to the purchase money, every year, for maintenance and repairs. With railroad equipments, and especially locomotives, however, this is a very important consideration. The cost of "running" and maintaining a locomotive is very large, and may often amount, in a single year, to all of the original value of the machine. The principal items of the operating expenditure are for fuel and repairs. With ordinary management, economy in these expenditures can be only secured by the best construction of the engine, and the best quality of its material. The arrangement and proportions of all the details of a locomotive boiler—furnace, grates, tubes, damper, chimney, etc., are as influential in economy of fuel as are the details of any kind of heating or evaporating apparatus. So are the proportions and adjustments of the valves, which are among the vital parts of the engine. Again, the durability of an engine, wherein any deficiency involves the long list of "repairs" which swell the running account, depends chiefly upon the proper proportion of its parts and upon their soundness. There are a great many failures and derangements constantly occurring to locomotives which could have been anticipated and provided

against in the builder's workshop. If, from a desire to cheapen an engine, it is left liable to breakage or failure, such as would require \$1000 to repair, to say nothing of the detention, and the derangement of business,—then it would certainly have been good policy to have added \$500 to the first price to pay for a better construction. It is a very important fact that the cost of providing against failures of machinery is nothing compared with the cost of repairing them. A difference of only \$25 in the cost of some part of an engine might determine the necessity of a renewal costing \$1000, or even more.

The relative efficiency of engines is also to be considered as well as their price. If the standard of power be taken as the capacity of cylinder, it is often the case that a cheap engine is made so only at the expense of boiler and steam room, which are among the most important elements of power. With a given size of cylinder, a wide difference often exists in the boilers of locomotives by different makers. Tube surface is especially important, while the cost of the whole work is materially affected by the extent of this single element.

There is another standard of power, also, that of weight, which may be readily turned to the advantage of the builder if it be regarded as the basis of price. Engines of the same weight may be unlike in the very nature of their material. Cast Iron may take the place of wrought in many essential parts, and at one half the price of the latter. Brass, especially, costs heavily, and weighs less than iron for equal strength.

It is a proper and profitable field, then, for the judgement of railroad agents to learn the relative efficiency of different engines, or at least the principal and real elements upon which their efficiency depends. Although conforming to either of the arbitrary standards which we have indicated, different engines may differ widely in their efficiency; while, at the same time, the means of superior efficiency, cannot reasonably be attained, except by a proportionate expense.

To secure proper economy in fuel, proper durability and efficiency, then, every company is safer in paying a liberal price for their equipments, being sure that the difference is placed not entirely in the seller's pockets, but principally in the objects purchased. It is a safer practice than in buying "cheap work," solely upon its merits as such. This doctrine has a sound application to a considerable extent, although we do not wish to be understood as advocating Pat's policy of paying double price to avoid all expense.

To apply the principle, however, as far as it may be properly supposed to extend, we will suppose a saving of one tenth of the expenses of a company, (a very reasonable estimate) by the addition of one tenth to the cost of their work, or otherwise to their capital.

First Case.

Capital,	\$1,000,000,
Gross Earnings,	150,000,
Expenses,	80,000,
Dividends,	7 per cent.

Second Case.

Capital,	\$1,100,000
Gross Earnings,	150,000
Expenses,	70,000
Dividends,	7 1/2 per cent.

Showing, quite well, that to a reasonable extent,

a company does not lose, but gains by making its capital account sufficient to secure the best kind of work.

Tunnel of the Pennsylvania Railroad.

Since the opening of the long tunnel of the Pennsylvania Railroad under the Alleghany mountains, some notes of its dimensions, cost, etc., gathered from the report of the chief engineer, may be interesting.

The principal dimensions of the tunnel are as follows; length 3612 feet, width 24 feet, height 22 feet above grade, or 21 3/4 feet above the rails; distance below the summit of the mountain 202 7-10 feet, depth of Eastern shaft 149 8-10 feet, of middle shaft 195 7-10 feet, of western shaft 184 4-10 feet; sections of first shafts 6 by 10 feet, of new shaft 8 by 13 feet; depth of new shaft 194 1-10 feet.

Much of the material excavated is fire clay, which, when exposed to the air and moisture, swells, cracks and falls in large masses. Nearly the whole work will require arching. Owing to the character of the material a larger quantity required removal than if it had been of a solid and permanent kind. In the middle shaft from 120 to 175 gallons of water per minute were pumped and discharged at the top of the shaft; and as the small size of the shafts first constructed did not afford facilities for the removal of material as fast as it was excavated, a new shaft was sunk, and a large and powerful engine substituted for the small one at the west shaft.

The excavation of the tunnel was finished on the 21st of January 1854, having been nearly two years in progress. During the year ending in March 1853, the average quantity of material removed per month was 2768 cubic yards; but since that time by increased exertion, the average monthly quantity has been 4555 cubic yards. There are about 18 cubic yards in each lineal foot of the tunnel, so that previous to March 1853, the daily progress was less than six feet on all faces, and since that time less than ten feet. The entire number of working faces afforded by all the shafts and at the end is ten.

The entire cost of the tunnel will be about \$450,000, or 125 per lineal foot, or nearly \$7 per yard.

The chief engineer of the work was Herman Haupt, Esq. Principal; Assistant, Thomas Seabrook, Esq.; Constructor, Thomas Rutter.

The proposed Hoosic Tunnel is 24,100 feet long. At the same rate of expenditure per foot, its cost will be \$3,012,500. Its time of construction if the same, in proportion to length, as the Pennsylvania tunnel with four shafts, will be 12 years 3 months.

If the geological illustrations of warped or undulating stratification are correct, the tunnelmen at Hoosic may expect to find some of the toughest kind of granite before half a mile of their excavation is completed. If the mountain is stratified and the stratification has been undisturbed, the micaceous rock would of course show itself on both sides, while it might but barely cover a deep bed of granite below. Considering the abrupt elevation of the mountain, in proportion to its breadth, we are confident that a perforation of less than a quarter of a mile will disclose a different character of material from what appears on the surface. But it is not now necessary to throw doubts in the way of the enterprise. Its friends have se-

cured, as they profess, funds enough for its completion, while its opponents have prophesied that event at the end of the comfortable period of thirty years. Should the exertions of its friends prove insufficient it may perhaps be finished by an earthquake.

Pennsylvania Railroad.

Stationary and Locomotive power on grades.

The Alleghany Portage Railroad is the principal example in the whole world of the application of fixed power to Railroads. It was constructed in a primitive period of engineering, not with a view to the especial merits of railroads, but as a necessary link in the line of the Pennsylvania Canal, connecting its Eastern and Western divisions, by a portage across the Alleghany ridge. Towards the attainment of this purpose, the result of the operation of the railroad was reasonably successful. But when a new and improved channel had been opened, parallel to the general course of the canal, and embracing the portage within its route, a new standard of "successful operation" was established. The portage then became part of a new system, and its success had to be measured by a relative standard, instead of by its absolute results as before.

The Pennsylvania Railroad, forced into a temporary experience with the "inclined planes," sought from the first to avoid them, and has now attained that result by the completion of an independent line, operated by locomotive power.

The principal reasons which induced the construction of the independent line were these. First, the "Portage" was a state work, and a claimant for state tolls; second, it involved a serious delay to any heavy passenger business, such as was anticipated for the Pennsylvania Railroad; and third, the planes worked by a rope, were not considered as entirely safe. To these may be added a general belief that the system of operation by stationary power was more expensive than if performed by locomotives. On the latter point however, there is a wide difference of opinion among engineers of the highest reputation.

The Pennsylvania Railroad has avoided the planes by an extremely favorable system of gradients. In place of abrupt ascents of 1 in 10, the worst grades opposed to the heavy business are of but 1 in 100; while on the opposite side of the summit the maximum grades are 1 in 57, and the average 1 in 66. Yet, the preference of the engineering department of this road, is in favor of inclined planes and fixed power, in their assumed adaptation and economy in freight business.

The Baltimore and Ohio road, which has grades of 1 in 44, for long distances in both directions, is operated by locomotive power throughout, and with a decided preference for the practical convenience and economy attained under that system.

The preference of the latter company is a natural and a general one everywhere. Fixed power is an incongruous element in a railway system. But as, in an abstract view of its relative cost, its merits are less understood, we propose to examine some estimates of its economy, as found in the last report of the Chief Engineer of the Pennsylvania Railroad Company.

The expenses of working plane No. 8, the longest and most costly on the Portage road, have been found to be as follows, per day

1. Engineer.....	\$2. 00
1 Assistant Engineer.....	1. 25
2 Firemen.....	2. 25
2 Hitchers.....	2. 25
2 Hitchers.....	2. 00
9 Horses.....	6. 30
2 Drivers.....	1. 40
Oil and Tallow.....	3. 00
Coal, 100 bushels.....	3. 00
Wear of Rollers.....	2. 00

\$25. 45

Wire rope costs 56 cents. per foot, Plane No. 8 is 3117 feet long—whole cost of rope \$3500. The average durability of the rope is one year. If the old rope be supposed to be worth nothing, the cost per day will be \$11.66. The machinery of one of these planes, besides rope and rollers, costs \$7500, the interest and repairs of which per day would be \$3. The total cost of the plane per day would therefore be \$40.11.

This plane rises 307 feet in 3116 feet. Suppose now, the same elevation to be overcome by a grade of 80 feet per mile, the length of the plane would be about four miles. The comparative cost of working four miles of road; in one case with over 3 miles level and 3117 feet rising 307 feet, operated by stationary power; and in the other case an uniform rise, worked by locomotives, is then estimated as follows:

The gross load of an engine, having the adhesion of 20 tons upon the drivers; is 650 tons on a level, and 105 tons upon a grade of 80 feet per mile. The cost of such an engine per day may be estimated as follows:

Cost of an engine \$8500.....	
Interest per day.....	\$1. 70
Running expenses per day, as per detailed report of the Reading Railroad Company.....	
Engineer.....	3. 00
Fireman.....	1. 50
Fuel.....	18. 58
Oil and Tallow.....	1. 16
Repairs of Engine and Tender.....	4. 89

\$30. 83

This estimate is finally made as low as \$25.

Estimating the capacity of the plane at 5620 tons passed each way in 12 hours, it would require 5 4-10 engines, carrying 105 tons each, and running ten trips each way of four miles, to effect an equal movement.

The relative cost of fixed and Locomotive power is then estimated as follows:

For plane; daily expenses.....	\$40. 15
For engine on $3\frac{1}{4}$ miles of level.....	25. 00

\$65. 15

For 80 feet of grade; 5 4-10 engines at \$25, 135. 00

Difference in favor of plane..... \$69. 85

This estimate, however fair it may appear from the consideration of the details upon which it is based, is altogether specious in a general application. We invite attention to the following facts.

The estimated capacity of the plane is equal to 3,205, 120 tons of cars, and freight per annum, more than four times what has ever passed it in that time. But the expenses of the plane are rated to be the same as they have been when passing a tonnage less than one fourth of its estimated capacity.

Neither does the estimate of the cost of the plane include any charge for extra brakemen, which have been generally employed at the Portage; nor does it include any depreciation of

horse power. The report of the Pennsylvania road, gives the cost of extra brakemen for last year, as \$20,000.

If all the charges of working the plane be considered, and a capacity of over three million tons annually be allowed for, the expenses of the plane would be nearer \$150 per day.

On the other hand, the comparative cost of Locomotive power is very high. To reckon anything like \$100 daily for fuel, for 5 4-10 engines, where an allowance is made of only \$3 for the same amount of stationary power, is simply absurd. If the Portage road is in a locality affording fuel as cheaply as is estimated, then the locomotives would be entitled to a corresponding advantage.

The other charges for locomotive power are not much too high.

But the great error in this estimate of the comparative expense of planes and locomotives is in underrating the power of the latter, and in not including the power of the regular engine attached to the train on the more level parts of the road. Instead of 105 tons, estimated as the proper capacity of an engine with 20 tons heavier adhesion, the Baltimore and Ohio engines, with 28 tons of adhesion, draw 252 tons as a regular, and 378 tons as a maximum load, up 83 feet grades. These 28 ton engines are now at much less expense than is estimated for the 20 ton engines. But upon an uniform grade of 80 feet, the regular engine attached to the train would pull at least 170 tons more, making 420 tons instead of 105 drawn in a single train, up the grade. The assistance of the regular engine costs nothing as its expenses are equally as great, or very nearly so, whether it goes with the train or not, over the grade. If the cars have a "continuous draw rod" they will not be overstrained in being drawn, in so long a train, over the grade.

There are very few practical instances where an ascent of 80 feet per mile is approached by an uniform level, for any long distance. Therefore the engines, approaching the grade will not often have more than 420 tons behind them, so that their trains will not require division, beyond that for a single assistant engine.

The relative assistance derived from the regular engines running with the trains, depends upon the physical features of the line approaching the grade; and where there are grades of from 35 to 55 feet, which are almost always inevitable in approaching higher grades, this assistance is very important. With fixed power, however, this assistance is thrown away.

Reviewing all the considerations affecting the relative expenses of the two systems, it is probable that a daily difference of \$50 would exist in favor of locomotive power upon the assumed grade, in a business of three million tons yearly. This would be independent of the greater dispatch and safety also afforded under this system.

Our review of the defence of inclined planes and fixed power, excludes of course, all consideration of passenger business; which upon any important line, would be very seriously interrupted by the "planes."

We are well convinced that inclined planes and fixed power are incompatible with economy, dispatch and safety, and especially so under any probable circumstances affecting the Pennsylvania Railroad.

Journal of Railroad Law.

CONTRACTS OF RAILROAD COMPANIES.

In the 73d volume of the English Common Law Reports, p. 775, is contained the decision of the Common Pleas in the case of the *East Anglian Railway Company, vs. the Eastern Counties' Railway Company*,

It was held that

A railway company, incorporated by act of Parliament, cannot, even with the consent of all its shareholders, legally enter into a contract involving the application of any portion of its funds for purposes foreign to those for which it is incorporated.

The defendants were incorporated by an act of Parliament, the 1st section of which enacted that certain persons should be united into a company, for making and maintaining a certain railway and other works by the act authorized, according to the provisions and regulations thereafter mentioned, and for that purpose should be one body corporate, by the name and style of the *Eastern Counties' Railway Company*, and should have perpetual succession and a common seal. The 3rd section of the act empowered the company to raise a sum of money "for making and maintaining the said railway and other works authorized by the act." The 5th section directed that the money so raised should be expended in and towards making and maintaining the said railway and other works, and in otherwise carrying the act into execution. And by subsequent sections it was provided that the profits, after defraying the expenses of making, maintaining and working the railway, were to be accounted for and divided amongst the proprietors of the undertaking.

It was held that it was not competent to the Directors of the *Eastern Counties' Railway Company* to enter into a contract with another railway company, to take a lease of their line, and to pay the costs incurred by them in the soliciting and promoting of bills in Parliament for the extension and improvement of such other line of railway, even though such extension and improvement would benefit their own company; and that such contract, if entered into, was illegal and void, and could not be enforced in a court of law.

Chief Justice Jervis, in giving his decision, observed in substance, that if the defendants could not embark in new trades, because they had only a limited authority, for the same reason they can do nothing not authorized by their act and not within the scope of their authority. Every shareholder has a right to expect that the charter will be adhered to, and that money will not be spent on undertakings which, at some remote period may be beneficial. The public also has an interest in the strict exercise of powers. By deviating from the charter, the comfort and safety of the line may be endangered. In *Colman vs. the Eastern Counties' Railway Company*, 10 Beavan 15, the Master of the Rolls, Lord Langdale, says, "It has been very properly admitted, that railway companies have no right to enter into new trades or businesses not pointed out by the act; but it has been contended that they have a right to pledge, without limits, the funds of the company in the encouragement of other transactions, however various and extensive, provided the object of that liability is to increase the traffic upon the railway, and thereby to increase the profit to the

shareholders. There is, however, no authority for any thing of the kind. The like doctrine is laid down in 12 Beavan's 352. *Solomons vs. Laing*. So in 15 Jurist, 914. *Beman vs. Rafford*. Also in *Bagshaw vs. the Eastern Union Railroad Company*. 2 McNaght & G., 389.

If the Eastern Counties' Railway Company is a corporation for only a limited purpose, and the contract is not within their authority, the assent of all the shareholders to such a contract, though it may make them all personally liable to perform such contract, would not bind them in their corporate capacity, or render liable their corporate funds.

ACTIONS FOR NEGLIGENCE.

In the case of *Marshall vs. The York N. & B. Railway Company*, 73 English Common Law, p. 655, the Common Pleas held in an action for baggage lost by the company's negligence, that the action being founded on breach of duty, and not on contract, it was not necessary to allege in the declaration, or to prove on the trial, that the compensation for carrying the baggage had been paid by the plaintiff. The plaintiff was entitled to recover although the fare was paid by his master, with whom he was traveling at the time.

The Superior Court of our city has lately been occupied with the suit of *Bulton Administratrix vs. Hudson River Railroad Company*. The plaintiff's deceased husband was killed upon the road, and the action was brought in accordance with the statute for such case provided.

The jury found on one of the issues that there was negligence on the part of the defendants in not furnishing their cars with proper lights to enable the drivers to see ahead and keep a proper look-out. They could not say whether there was negligence on the part of deceased or not. Verdict for plaintiff, \$3,600.

For the American Railroad Journal.

HOLLOW AXLES.

The London *Mc. Mag.* vol. 59, page 262, which contains an account of McConnell's hollow axles, has been copied by the whole tribe of Scientifics on both sides of the water, as if something new or useful, had been elicited thereby.

It must surely have been an entire waste of time, among such scientific men as were then and there assembled, to undertake to prove that a hollow cylinder, or a tube, is stronger than a solid cylinder of the same diameter, or, even to define in what proportion; as that question has been settled many hundred years ago.

According to Mr. Norris' observation, (page 264) it would appear that the "crystalline state" must be a new complaint of iron. He doubted, if it ever was produced by working upon Railways, and Mr. Stephenson had long before expressed the same opinion.

An old axle which had been in use three years was not crystallized while a new one broke in the same manner, was very badly so.

Moreover, a hollow axle could not be made crystalline, and Mr. Morris had tried many solid ones, which had been in use for twenty years upon the Liverpool and Manchester railway, and none of them were crystalline. Surely this just about settles the crystalline question, as being produced by bad manufacture, and cannot be produced in iron of superior quality, whether hollow or solid.

If twenty years will not produce this interesting state, I think there is little hope for the young humbug, and he had better "go to grass" again, as it is some years since he was up before. I think it is about ten years since his last appearance, when John Oliver York made a great fuss about him, and brought him out under the influence of a patent, and general Paisley.

I have often met him, these last twenty years, but he was always so hollow, that no dependence could be placed upon him.

Fuchs (Repertory No. 513) concluded very rationally, that, the alteration proceeds from "a breaking up of the continuousness of the mass," or, in other words, the entire destruction of its elasticity; in which case it is of no practical importance whether it is crystalline or not. If it is "busted up," broken down and good for nothing from hand usage, having stood all that ever iron should be expected to stand, it appears to prove nothing at all. If it breaks with but little hand usage, instead of proving that the quality of the iron is inferior and probably crystalline in consequence thereof, it is assumed that the crystalline state has been produced since the iron was manufactured, while in fact the crystalline state never has been produced in anything, in which it was reasonably well known not to have existed before.

So long as it is desirable to make Railway Axles as small as possible, consistent with the strength thereof, it is quite evident that no advantage can be obtained by making them hollow, unless, the quality of the materials can thereby be improved. The foregoing remarks are pretty near conclusive on this point, and go far to show that axles are not made with as much care as formerly. Mr. McConnell could not, (would not,) tell the cost of these axles, although five hundred of them had been made, but, he could astonish us by figuring out the immense amount saved in fifteen thousand waggons, and ten thousand miles, and eleven millions, (I don't know how many) tons "dead weight" as he called it, amounting to some eleven thousand seven hundred pounds sterling per annum; enough to work a moderate sized Railway, saved in the freight of "dead weight" alone!

A most singular circumstance in connection with axles is the fact that, the best which are manufactured in Prussia of a very extraordinary quality of cast steel, and not introduced into England until very recently, although they have been used for years in Germany, not one of which was ever known to fail for any cause that I am aware of, much less are they likely to fail from the "crystalline" disease, to which iron is said to be subject.

Cast steel tire, from the same manufactory, has more recently been introduced with promise of equally favorable results. One of them was exhibited at the Crystal Palace, made without welding, from a solid bar, and is a beautiful specimen of work.

Rails as well as axles ties, have long been patented to be made of steel, but hitherto, the latter have not been generally on sale; the axles and tire of cast steel are in the market, and there is no doubt will eventually supercede all others, and even the company which "does not profess to introduce anything new," must have them, or be ruined by "damages" at law.

Yours, respectfully,

T. A. R.

Savannah Valley Railroad.

We have been shown the report of Mr. Arms, Chief Engineer, to the President, Mr. Hutchinson, of the results of the experimental surveys of the above road, from which we cull the following interesting facts:—

The length of the experimental line from Anderson to Hamburg..... 93½ miles.
This can be brought down to..... 92 "
an increase of length over an air line of only 8 miles or 9½ per cent.

This compares favorably with the following:
Length over a straight line of the road from
Charleston to Columbia..... 25 per cent.
Columbia to Greenville..... 47 "
" to Anderson..... 28 "
Augusta to Atlanta..... 25 "
Savannah to Macon..... 27 "

A comparison of distances shows not less favorably.

Connecting with the Rabun Gap road at Anderson, it will afford a route from Knoxville, Tenn., to Charleston, S. C., 28 miles shorter than via Greenville and Columbia roads.

From Knoxville, via Dalton and Atlanta, to Augusta, is..... 377 miles,
Via Anderson..... 286 "

Difference..... 91. "
Knoxville to Savannah and Augusta..... 498 "
Via Anderson and Augusta..... 416 "

Difference in favor of Valley Route.... 82 "

The estimated cost of the Road, grading, bridging, masonry, &c..... \$799,070 00
Superstructure..... 757,000 00
Equipment..... 185,200 00
Engineering, &c..... 70,000 00

\$1,811,270 00

No estimate is hazarded of the business and profits to be expected from this desirable connecting link of the Southern Atlantic, with the Western States of the great valley. But they must be immense. The road will make Anderson an important depot for a produce and distributing point, similar to Atlanta in Georgia. It must also greatly increase the trade and property of Hamburg and Augusta—Augusta Constitutionalist.

Franklin Canal, or Lake Shore Railroad.

The difficulties in reference to the above Company have been settled by the Legislature of Pennsylvania, by the passage of the following bill, which we give below, from the interest which these difficulties have excited, and from the importance of the measures of "Pacification" to the Company.

AN ACT relative to the Sunbury and Erie Railroad Company and the Cleveland, Painesville and Ashtabula Railroad Company.

SECTION I. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same, that the Cleveland, Painesville and Ashtabula Railroad Company, as incorporated under an act of the General Assembly of the State of Ohio, passed the 18th February, A. D. 1848, entitled "An Act to Incorporate the Cleveland, Painesville and Ashtabula Railroad Company," and an act supplementary thereto, passed December 10, 1850, be, and they are hereby authorized to construct and use a railroad, with one or more tracks, commencing at and in the city of Erie, thence extending south-westwardly by the most practicable route on or along the Franklin Canal Railroad to a point on the State line of Ohio, where it may connect with the Cleveland, Painesville and Ashtabula Railroad, subject to the provisions of an act regulating railroad companies, passed the 19th February, 1849, and that they be and are hereby authorized to connect their road with any railroad or railroads legally authorized to come to or to lay a road within the limits of the city of Erie. Provided, That all such connections shall wholly cease so soon as the Sunbury and Erie Railroad

Company shall leave a track or tracks open for use leading into said city, unless they shall also make a connection therein with said Sunbury and Erie Railroad at the depots of the said last-named company.

Sec. 2. That the said Cleveland, Painesville and Ashtabula Railroad Company be, and they are hereby authorized, and required to purchase the railroad now constructed from the city of Erie to the Ohio State line, and all the right or interest of the Franklin Canal Company, or any other parties in and to the same, with its appurtenances and the right of way, and all other rights and property connected therewith, and shall also purchase any shares of the said original Franklin Canal Company's stock at par, and pay the interest and principal on all bonds of said company according to their tenor, and thereafter the said Cleveland, Painesville and Ashtabula Railroad Company may use and enjoy the said railroad and its appurtenances, with a full release of any and all rights and claims of the Commonwealth thereto or therein, and the said Franklin Canal Company is authorized to make such sale and transfer to said Cleveland, Painesville and Ashtabula Railroad Company.

Sec. 3. That the said Cleveland, Painesville and Ashtabula Railroad Company shall extend the tracks of their road, equal in all respects except the grades, to the main track from a point west of Liberty street, being the western boundary of the city of Erie northeastwardly by the most practicable route to the harbor of Erie at or near the depot grounds of the Sunbury and Erie Railroad Company, and have the same opened and ready for use within two years, or sooner, if the said Sunbury and Erie, or any other railroad coming from an eastwardly direction, shall have one or more tracks completed to the said harbor. *Provided*, That the Sunbury and Erie Railroad Company shall grant such use of their depot grounds as may be agreed upon by the parties, and that the city of Erie shall grant free the right of way over and along such public streets or public grounds as may be required for the track or tracks of said road to the harbor.

Sec. 4. That all the privileges and immunities granted to the said Cleveland, Painesville and Ashtabula Railroad Company in and by this act, are granted upon the following terms and conditions, namely:

First. The said Cleveland, Painesville and Ashtabula Railroad Company shall make such connection between their railroad and that of the Sunbury and Erie Railroad Company, at or near the city of Erie as may be best adapted to the safe, cheap and ready transferring of cars, passengers, baggage and freight from one road to the other, so soon as the western division of the said Sunbury and Erie Railroad shall be finished, and that so soon as the said Sunbury and Erie Railroad Company shall have laid down a track of road from Sunbury to Erie, then and thereafter the said Cleveland, Painesville and Ashtabula Railroad Company shall run their freight and passenger trains to the depots of the Sunbury and Erie Railroad Company, and from then and thereafter shall not grant, furnish or allow to any company whose railroad shall terminate at or pass through or near the city of Erie, nor to any company or companies whose road or roads shall connect with or be contiguous to such road terminating at or passing through or near the city of Erie any facilities, privileges or advantages which are not equally granted and furnished to the Sunbury and Erie Railroad Company, nor give or furnish, or permit to be given or furnished, by any agent, or by any person or persons, company or companies, using their road directly or indirectly, any inducement of any kind whatever to any party to travel or to send or forward property or mail matter in any direction on or over any railroad so terminating at or passing through or near the city of Erie, or connecting or contiguous therewith, in preference to traveling or sending or forwarding such property or mail matter on or over the said Sunbury and Erie Railroad, and all passengers, prop-

erty and mail matter passing over the said Sunbury and Erie Railroad, or destined to pass over the same, shall be received and dispatched by the said Cleveland, Painesville and Ashtabula Railroad Company with all proper and reasonable speed and dispatch. *Provided*, That the Commonwealth hereby reserves the right, at any time that may be deemed necessary, to protect her interests, to impose such taxes on the Cleveland, Painesville and Ashtabula Railroad Company as may be imposed by any general law upon all the railroads of the Commonwealth.

Second. The said Cleveland, Painesville and Ashtabula Railroad Company shall, before exercising any of the rights or franchises hereby granted, subscribe for five thousand shares of the capital stock of the Sunbury and Erie Railroad Company, to be paid for in the bonds of the said Cleveland, Painesville and Ashtabula Railroad Company, as hereinafter authorized, to be issued, bearing seven per cent. per annum interest, payable half yearly, the principal payable in twenty years, to be secured by a mortgage of all their property, rights and franchises, and which shall be a first lien or mortgage on that part of their property in Pennsylvania, and on the rights and franchises granted or to be granted by this act. Said mortgage to be executed to such trustee as shall be satisfactory to the said Sunbury and Erie Railroad Company. The payments in bonds on account of such subscription to be made, and stock issued therefor in the same proportions, and at the same times, that the city of Philadelphia shall make their payments on their second subscription of ten thousand shares to the capital stock of the said Sunbury and Erie Railroad Company, which said five thousand shares of the stock, unless otherwise agreed to by both parties, shall be inalienable until the maturity of the bonds given in payment therefor, and so declared on the face of the certificate for the same, and in all the elections or stock votes of the Sunbury and Erie Railroad Company, one thousand six hundred and sixty-seven shares, and no more, may be voted upon by the said Cleveland, Painesville and Ashtabula Railroad Company.

Third. That at least three of the Directors of the said Cleveland, Painesville and Ashtabula Railroad Company shall be citizens of the Commonwealth of Pennsylvania.

Sec. 5. That said Cleveland, Painesville and Ashtabula Railroad Company be, and they are hereby authorized to issue their bonds in sums of not less than \$100 each, bearing interest at the rate of seven per centum per annum, payable half-yearly, to be secured by a mortgage or deed of trust of all their property, rights and franchises, to the amount of five hundred thousand dollars; and the said Sunbury and Erie Railroad Company are hereby authorized to receive said bonds at par in payment, as before provided, for the subscription to their stock hereinbefore authorized and directed to be made.

Sec. 6. That if the said Cleveland, Painesville and Ashtabula Railroad Company shall in any respect knowingly and intentionally refuse or neglect to conform and comply with all and singular the terms and conditions herein before recited and imposed, the fact of such refusal or neglect having been adjudged by a court of competent jurisdiction, then, and in such case, all the rights and privileges, powers and immunities granted to said company by this act, or intended so to be, shall forthwith cease and determine. *Provided*, That nothing herein contained shall be construed to release the Cleveland, Painesville and Ashtabula Railroad Company from liability to the Sunbury and Erie Railroad Company by reason of such refusal or neglect; but the said Sunbury and Erie Railroad Company may from time to time recover from the Cleveland, Painesville and Ashtabula Railroad Company such damages as they may sustain therefrom.

Sec. 7. That immediately upon the passage of this act the Susquehanna and Erie Railroad Company may assign and transfer to the Sunbury and Erie Railroad Company all their estate and effects,

rights, liberties and franchises; and from and after such transfer and assignment, duly executed under their corporate seal, and said Sunbury and Erie Railroad Company shall become vested with all the estate and effects of the said Susquehanna and Erie Railroad Company, and shall, and may exercise and enjoy, all the rights, privileges and franchises of the said Company, in their own name, and in addition to those now enjoyed or possessed by themselves, as fully as though the same had been directly granted to the said Sunbury and Erie Railroad Company. *Provided*, That if the said Sunbury and Erie Railroad Company shall, under the rights and franchises transferred to them by the said Susquehanna and Erie Railroad Company, or under any other legislative authority, construct a railroad leading from the city of Erie to the Ohio State line, parallel with the said Cleveland, Painesville and Ashtabula Railroad, or shall connect with any other such railroad, then and in such case the Sunbury and Erie Railroad Company shall pay to the said Cleveland, Painesville and Ashtabula Railroad Company so much as may have been paid on account of the said subscription of 5,000 shares of stock, either in cash or in the bonds aforesaid, at the option of said Sunbury and Erie Railroad Company; and thereupon the said Cleveland, Painesville and Ashtabula Railroad Company shall deliver up the certificates of stock issued to them to be canceled, and thenceforth the said Cleveland, Painesville and Ashtabula Railroad Company shall be, and they are hereby authorized to exercise all the rights and privileges hereinbefore granted, or intended so to be freed and discharged from all and singular the terms and conditions hereinbefore imposed and provided.

Sec. 8. That before exercising any of the rights and immunities hereby granted to the Cleveland, Painesville and Ashtabula Railroad Company, and to the Sunbury and Erie Railroad Company, respectively, either company shall give to the other notice in writing, under their respective corporate seals, that they accept this act and agree to become bound by all the provisions and conditions therein contained; and immediately upon either of said companies giving such notice to the other, then such company shall forthwith be and become entitled to all the benefits, rights, privileges and immunities granted by this act, subject, however, to the performances of the terms, provisions and conditions therein contained.

The above arrangement is stated to be "highly satisfactory to all parties." We are glad it is so. We presume the Lake Shore line, desirous of seeing the Sunbury and Erie Railroad built, are very willing to be allowed to aid a work important to its interests. Should the stock of the new concern prove valuable, the former will have the good fortune of securing another outlet and tributary, without submitting to a sacrifice. Should the contrary be the fact, the Lake Shore company can probably afford to throw away the \$500,000, provided it be the means of constructing the Sunbury and Erie road. This company is delighted with the arrangement, because it gives them an opportunity of compelling their more enterprising and wealthy neighbors to shell out half a million, which will enable this concern, which has been weather-bound "from time out of mind" for want of money to raise the wind, to set sail. The success of the road may turn upon this half a million, which has been seized as a sort of a waif from the capital of New York.

But as the parties interested are mutually satisfied—one that it has got so much, and the other that it has escaped by paying so little—all who have no interest certainly ought to be equally satisfied. New Yorkers are satisfied, because the arrangement will help to build the Sunbury and Erie road, a work which they regard as calculated

to be highly useful to them. The people of Philadelphia are pleased for a similar reason. Whether the satisfaction which the press of that city displays springs from a feeling that the settlement of the difficulty has relieved them from an unpleasant predicament, we will not give an opinion. But what has become of the offended majesty of the State? Has it been appeased by a sum of money? Has wounded dignity an equivalent in filthy lucre? But above all, what has become of the rights of the people of Erie in the arrangements that have been made? Completely sold out, sacrificed. Upon the break of gauge their hopes of salvation were built. The Governor, in his message in their vindication, states that the

"Effects of a break of gauge, and consequent trans-shipment east of Erie, upon the business of that harbor, must be paralyzing if not fatal."

By the arrangement now entered into, the Cleveland and Painesville road may connect their gauge with that of the road running to Buffalo, and break bulk there instead of at Erie. In fact, the two may be hereafter run as one road. So much for the principle involved in the Erie quarrel. It was a game of plunder from the beginning. The Erie people being the weaker party, have been rudely thrust aside, and get not a penny that was not offered time and again by the Lake Shore interest. If the positions they took were correct, they are ruined beyond remedy. The town was pretty thoroughly ruined in public estimation long ago.

Bellefontaine and Indiana Railroad Company.

The fourth annual report of the the Board of Directors of the Bellefontaine and Indiana Railroad Company, under date of January 12, 1854, gives a full, and encouraging statement of the affairs of that company, since the completion of the road, in July 1853.

The completion of the road was delayed longer than contemplated for several reasons: the principal of which was a rise in the price of iron, and an increased price paid by the Company in the shape of duties; and the failure of the manufacturers in Europe to deliver the rails at the proper time, by which the Company was obliged to pay advanced prices for transportation.

The Indianapolis and Bellefontaine railroad was opened to the State line of Ohio a short time before this road was completed; so that a connection was at once made with the network of roads centering at Indianapolis. The two roads now run as one line under the superintendence of J. Nottingham Esq.

At Indianapolis, this line now connects with eight different railroads, branching to various points, and meeting on the Union track, which nearly encircles the city, to wit:

Madison and Indianapolis, length,.....	86 miles.
Terre-Haute and Indianapolis, ".....	72 "
Lafayette and Indianapolis, ".....	64 "
Peru & Indianapolis, supposed ".....	94 "
Indianapolis and Bellefontaine, ".....	84 "
Jeffersonville, ".....	108 "
Central supposed length,.....	72 "
Lawrenceburg,.....	90 "

The road is well stocked with first class engines and cars; but the accommodations are not half equal to the pressure of business offering. On the first of Nov. the company took entire possession of the road, relieving the contractors.

The entire expenditures of the road up to Jan. 1854, have been \$2,838,951.26.

But the company hold real estate, taken in payment for stock issued to the amount, (at cost,) of	249,431 75*
And materials, (surplus cross ties,) worth.....	3,750 00
Making.....	253,181 75
Which will be sold and reimburse the expenditure, pronto, leaving.....	\$2,585,769 51

The above is the actual cost, thus far, of the Road, its appurtenances and equipment, which makes the cost, per mile, (118 miles,) \$21,913.30.

The machinery, locomotives and cars of the company are all of the latest and most improved patterns, of the best materials, and well constructed. Our large and commodious new engine house, at Gallon, with accommodations for 20 engines, is nearly ready for use; one-fourth of which is to be paid for and occupied by the C. C. & C. R. R. Company. The same company is to occupy and pay for one-third of the repair shop, at the same point, which is also nearly ready for occupancy.

The engine house at Bellefontaine, with stalls for 5 engines, is nearly completed.

Warehouses have been erected, to accommodate the business of the Road, at Gallon, Caledonia, Marion, Larue, Ridgway, Bellefontaine, De Graff, Pemberton, Sidney, and Union, and others are being erected at other points. Small passenger houses will be required, at Marion and Sidney, during the present year.

But after everything is made complete, it is estimated the road will cost from \$22,000 to \$23,000 per mile. The increase over the estimate is attributed chiefly to expenditures not originally embraced in them, to the delay in obtaining iron, and to the advance in the price of labor, and materials.

Since the report was written the gauge of the Indianapolis road has been changed, so as to correspond with that of the Bellefontaine and Indiana road.* An uniform track now exists between Buffalo and Indianapolis, through Cleveland; also from Pittsburgh to the same point over the Ohio and Pennsylvania road, which connects with the Bellefontaine and Indiana at Crestline. It is believed that this uniformity of track will add largely to the efficiency and value of the above road.

The report states that the troubles at Erie during the past winter, operated disastrously to the interests of this road, not less than \$25,000 having been diverted from this line to other points, at the date of the report.

The road was opened for business July 12th, 1853, and from that time up to Jan. 1st, 1854, the gross earnings of the road have been—

	\$135,623 49
And the running expenses, after deducting fuel, oil, and other materials for use,.....	33,255 30
Net profits,.....	\$102,368 19
From which deduct 6 months interest on bonds,.....	84,440 00
Leaves applicable to dividend,.....	67,928 19
Four per cent. dividend, (payable mainly in stock,) declared on \$1,696,444 25-100 stock on dividend list,.....	67,861 77
Which leaves a surplus of.....	\$66,42

*Note.—This real estate was taken at an early day in the progress of the road, before the construction of the road had raised the price of real estate. It is now worth much more than it cost.

After direct connection is made with St. Louis, the Directors confidently anticipate a very large increase of business and receipts.

The following is a statement of the receipts and expenditures of this road, up to Jan. 1st, 1854.

Capital Stock paid in,.....	\$1,722,231 11
Mortgage Bonds,.....	792,000 00
Real Estate Bonds,.....	192,000 00
Bills payable,.....	64,791 96
Earnings used in Construction,.....	67,928 19
	\$2,838,951 26

Graduation, Masonry, and Bridging,.....	\$510,487 36
Superstructure,.....	1,010,961 94
Right of Way,.....	27,120 85
Engineering, Officers' Salaries, Rent, Stationery, &c.....	79,853 66
Depots and Stations,.....	55,750 27
Gravel Ballast,.....	90,826 06
Equipment,.....	343,068 92
Incidental Expenses,.....	14,966 25
Telegraph Line,.....	7,606 00
Interest, Discounts, Commissions, and Taxes,.....	363,829 83
Bills Receivable,.....	63,820 22
Real Estate taken for Stock, remaining unsold,.....	249,431 75
Material remaining on hand,.....	3,750 00
Cash in the hands of Treasurer and Agents of the Company,.....	17,528 15
	\$2,838,951 26

There are in the line 16 locomotives, 208 eight-wheeled curves, 100 four-wheeled gravel cars, and 27 hand cars. All the cars above mentioned are now on the road. The final estimate of the whole cost of the road, exceeds the original estimate by the sum of \$138,596.93; the difference of which is attributed to the same causes as those mentioned in the report of the President. The following are some of the leading characteristics of the road.

Length of Road,.....	118.23 miles.
Length straight,.....	108.00 "
Length curved,.....	10.23 "
Length of curved line with radii varying in length from 2,865 to 11,460 feet,.....	8.77 "
Length of curved line with radii between 1,910 and 2,865 feet,.....	0.77 "
Length of curved line on minimum radius, 1,146 feet,.....	0.67 "

Only about 600 feet in length of the minimum radius of curvature occurs between stopping stations. The residue is at Sidney, and in the temporary track at Gallon, soon to be replaced by a new track, on an easy curve. These are tangents of 17, 13, 12, 8, 7, and 5 miles in length, respectively.

GRADES.	
Level line,.....	20.69 miles.
" and under 5 feet per mile,....	30.82 "
" and " 10 " ".....	37.85 "
" and " 15 " ".....	51.32 "
" and " 20 " ".....	61.64 "
" and " 25 " ".....	68.80 "
" and " 30 " ".....	80.79 "
" and " 35 " ".....	87.25 "
" and not over 39.60 ".....	118.23 "
Total length of maximum grades,....	23.56 "
Longest continuous maximum grade,.....	3.00 "

The report complained of a failure on the part of the Cleveland, Columbus, and Cincinnati Company; to comply with a contract entered into with the Bellefontaine and Indiana Company, requiring the former to furnish a certain proportion of Engines

and Cars to unite in doing the business from the line of the Bellefontaine and Indiana Company.

The consequence has been that the cars of this road have to run not only over their own road, but over that of the Indiana 80 miles, and 79 miles of the C. C. and C. road; and besides being often detained at Cleveland as warehouses, and at a time when western business is pressing.

The report also urges an independent connecting road of four miles between Galion and Crestline, in relation to which we copy the following:

The Ohio and Pennsylvania road, since its completion to Crestline, 188 miles from Pittsburgh, placing it in connection with the C. C. & C. road; and, by using 4 miles of the latter, with your line at Galion, has been crowded with business. The superintendent recently informed me that they had not been able to accommodate the local freight accumulating on their own line; much less, to extend proper facilities for the transmission of the still greater amount awaiting shipment along your line and its tributaries in Indiana. That company has commenced active measures for bringing about a connection with the Pennsylvania railroad across the Alleghany river, between the cities of Alleghany and Pittsburgh. The Pennsylvania road which has for some time been in operation with the State Inclined Plane road, will, during the present month, be finished throughout, with a new tack, avoiding all the inclined planes. Trains will then run from Philadelphia to Pittsburgh in 15 hrs. saving 6 or 7 hours on their present timeable. This change, so long desired by the traveling public, will unquestionably add largely to the business passing between the west and the eastern cities, by the Pittsburgh route. Many, even now, travel by this line, in preference to the Wheeling route to Baltimore and Washington; and with the avoidance of the inclined planes, and saving of time, it must become a favorite with the traveling community. Thus will, in a few days, be presented a strong additional inducement for the construction of the 4 miles of Union track long since proposed between Crestline and Galion. This accomplished, with a second track on the C. C. & C. road, from Galion to Cleveland, the Bellefontaine and Indiana road will take its proper stand among the railroads of Ohio.

In addition to roads already constructed, there are several proposed works, which, when completed will have a tendency to pour an increased business into the Bellefontaine and Indiana road. One of these is the Owl Creek Valley connection from Marion to Mt. Vernon 37 miles; thence to Coscocton 37 miles, thence to Steubenville 78 miles and thence to Pittsburgh, via the Pittsburgh and Steubenville road, 42 miles.

Another connection is from Cincinnati to Sydney, called the Dayton and Michigan road. From Dayton to Troy 20 miles; this road was opened last spring, leaving but 17 miles between Sydney and Cincinnati to be completed. This road, passing as it does through the exhaustless Miami Valley, is regarded as a valuable tributary to the Bellefontaine and Indiana road.

The great strength of the Bellefontaine and Indiana railroad, is in the fact, that it connects by the shortest line, the capital of Indiana, and the web of railroads about that point, with the great Lakes and the eastern markets. It must become apart of the shortest route from Cleveland, not only to St. Louis, but to all the towns in the Lower Ohio. It traverses an excellent section of country, which must supply it with a lucrative local traffic. We regard it a first class Western Railroad, not only as a connecting line between other systems, but as a local work.

Extent of the Domain of the United States.

The following report of the Commissioner of the land office, made to the Secretary of the Interior, and submitted to the House of Representatives on the 21st of March, 1854, by the President, in obedience to a resolution of that body, explains a material error as to the prevalent estimate of the extent of the public domain. The letter of the Commissioner is as follows:

GENERAL LAND OFFICE, March 15, 1854.

Sir: In compliance with the resolution of the House of Representatives, received in your letter of the 24th ult., which resolution is as follows, viz:

Resolved, That the President of the United States be requested to cause to be prepared, for the use of this House, tabular statements exhibiting—

First. The area of each State and Territory, expressed in square miles and in acres;

Second. The extent of public domain now remaining in each State and Territory, expressed in acres;

Third. The extent of public domain alienated by the government of the United States in each State and Territory, distinguishing between that sold for a valuable consideration and that given, granted, ceded, or conveyed for the purposes of education, public buildings, internal improvements, and miscellaneous objects;—

I have the honor to transmit herewith a statement containing the information called for;

By the former statement of this office. Acres.
The whole surface of the public domain is made to cover. 1,612,184,919
By the statement now furnished... 1,391,480,320

Making difference..... 220,704,599

This discrepancy is explained by the fact that Oregon, the proposed Nebraska, and the Indian Territories, are set down in the former statement as containing.... 764,197,760

Which was in accordance with an estimate of the public domain west of the Mississippi river, made many years since on the most correct maps then in existence, reduced from time by deducting the estimated surfaces of the organized Territories; but by reestimating the surface according to the improved maps of the day, and the new divisions thereof by the recent legislation of Congress and the bills now pending before that body, it is found, as now stated, to cover only..... 543,493,120

Leaving difference..... 220,704,640

From which deduct a slight error in the old statement, made in reducing the miles to acres for the States of Illinois and Alabama.. 41

Leaves difference, as above..... 220,704,599

With great respect, your obedient servant,
JOHN WILSON, Commissioner.
Hon. R. McCLELLAND, Sec'y of the Interior.

Consolidation of Railroads.

The consolidation of the railroad lines between Baltimore and Sunbury, Pa., is likely to take place. The lower branch of the Pennsylvania Legislature, on Tuesday, passed the bill to consolidate the York and Maryland line, York and Cumberland, Susquehanna and York, and the Susquehanna Railroads into one road, to be known as the Northern, Central Railroad. The bill had previously passed the Senate, and no doubt is entertained of its receiving the approval of the Governor. The consent of Maryland to the proposed consolidation was granted by the Legislature at its recent session, and the only legislation now necessary to consummate the enterprise is to come from the Baltimore City Council. An ordinance

relating to the subject was passed by both branches, but was returned by the Mayor without his approval, and another, amended so as to meet his objections, has since been introduced.

Earnings of the Maine Railroads for 1853.

We give below a statement showing the gross income of the Railways of Maine in 1853.

	RECEIPTS IN 1853.			
	Passengers.	Freight.	Other sources.	Total receipts.
Androscoggin,	\$9,168	9,555	428	19,152
A. & St. L.	130,435	167,733	17,869	316,038
And. & Ken.	79,305	68,176	6,594	154,106
Bangor & Pisc.	23,269	18,911	1,957	43,138
Calais & Baring,	1,361	25,675	1,001	28,038
Ken. & Port.	134,432	34,628	7,941	177,003
Machiasport,		9,715	100	9,815
P. S. & P.	187,808	58,197	16,061	262,077
York & Cumb.	35,170	18,905	284	54,361

\$600,951 411,439 52,238 1,064,628

Estimating the cost of the Railroads of Maine in operation in round numbers at \$12,000,000, the gross earnings are about 9½ per cent on the cost. Our Railroad returns are too incomplete to allow of any thing like an accurate statement of their working expenses, or of the net earnings of the roads.

Wabash and Erie Canal.

The Trustees of the Wabash and Erie Canal, of the State of Indiana, report the
Tolls and water rents of 1853.....\$181,204
Land sales for year..... 417,379
Interest on New-York deposits..... 1,481

Total increase of year.....\$600,064
Balance from 1852..... 265,376

Total.....\$865,440
Expenses of year.....\$98,373
Construction..... 473,088
Interest on debt..... 64,416
Miscellaneous..... 9,395— 642,272

Balance on hand December, 1853...\$223,168

Cincinnati Peru and Chicago Railroad.

There are now engaged in the construction of the above road, about one hundred and fifty workmen within the limits of this county, and as many more at different points on the line. We are assured, that in the course of one week or ten days, the hands put upon the track will be nearly double in number, making a force of five or six hundred men, and that the road between this place and Plymouth will be completed and placed in running order by the first day of October next. Connecting at that point with the eastern portion of the Fort Wayne and Chicago road, which will soon thereafter be in an available condition, a portion of our own will thereby be brought into early operation and be made to pay into the treasury of the company a remunerating profit. Those interested, therefore, in the value of the stock, as well as the citizens of Laporte generally, solicitous for our sectional prosperity, will have cause to congratulate their fortune, that the Peru and Chicago railroad has for its contractors, men who sustain so well their reputation for unsiring energy and promptness as Messrs French & Tyner.—Laporte Times.

Henderson and Nashville Railroad.

The Hopkinsville Whig says there are now about six hundred hands at work on this road, principally in Henderson and Hopkins counties, where they are at work on the tunnel and the deep cut. The tunnel will be 600 feet in length. The deep cut is 300 feet in length and about 60 feet deep from the apex. The road has been grubbed and cut out nearly throughout its whole length from Henderson to Trenton; about thirty miles have been graded, mostly in Henderson and Hopkins counties, and the work of grading is rapidly progressing. The managers of the road hope to

commence laying down the iron rail during the summer, and before fall it is hoped the cars will be on a portion of the road, and may be running from Henderson to Madisonville.

American Railroad Journal.

Saturday, May 13, 1854.

Stock and Money Market.

We have but to repeat the substance of what we have said for several weeks past. The ebb of the tide still continues. Securities of all kinds have touched, within the past week, a lower point than at any previous period. There appears to be no effort to sustain the *fancy* market, nor is there any demand for securities of an unquestioned character. A complete paralysis seems to have struck the entire market.

Under this state of things, it is worse than useless for railroad companies that do not possess a well-known reputation, to attempt to borrow money by a sale of their bonds. They will not only not succeed, but failure will, to a certain extent, discredit the character of the security offered.

At the present time no railroad company can safely borrow money beyond the means for payment within their reach, nor incur heavy expenditures in the construction of new works, relying on the ordinary mode of raising money by sales of bonds. The market is loaded down with securities much more attractive than any new project can offer, and some time must elapse before the supply on hand can be cleared off. Our own views will undoubtedly be abundantly confirmed by the experience of any person who, for a few months past, has attempted to effect negotiations. The state of things under which railroad companies are suffering will, in time work its own cure; but to allow it to do so in the end, it should not be aggravated by adding to the causes that produced it.

The drain of specie continues. The shipments for the last week were \$1,571,012; and for the year, \$9,987,073. The almost entire cessation of foreign orders for our securities is one of the reasons for the large export.

Below is the comparative statement of the City Banks for the weeks ending April 29 and May 6:

	May 6.	April 29.
Loans.....	\$90,688,774	\$90,245,049
Specie	11,487,034	10,951,135
Circulation	9,851,038	9,377,678
Deposits.....	63,857,487	59,719,381

The returns of Railroad Companies for April to date were as follows:

	\$351,379	\$200,219
Bal. & Ohio (main stem)...	165,801	111,894
Michigan Northern.....	145,156	104,128
Macon & Western.....	29,624	20,908
Cleveland & Pittsburgh...	42,000	39,380
Chicago & Rock Island...	86,944	new
New York and New Haven.	69,313	66,462

The city of Cleveland has loaned \$100,000 to the Akron Branch Railroad, payable in the stock of the Cleveland, Columbus, and Cincinnati Railroad.

Rome and Watertown Railroad.

The stockholders of the Watertown and Rome Railroad have voted to authorize its board of directors to indorse the bonds of the Potsdam and Watertown Railroad Co., under the recent act of the Legislature.

Railway Share List.

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	88
Androscoggin and Kennebec.. "	55	824,363	1,043,540	2,036,140	177,003	80,053	none	80
Kennebec and Portland..... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	98
York and Cumberland,..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	30
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	37
Northern	82	3,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	83
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	105
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	678,500	.....	.....	none	12
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	22
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	.....
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	.....
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. Cent.	.....	.....	94
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,636	434,599	114,098	6	94
Boston and Maine..... "	83	4,076,974	150,000	4,111,345	803,024	418,358	8	164
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6 1/2	14
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	418,289	7	8
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	0
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	5
Eastern	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	4
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	5 1/2
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	8
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	17
Boston and New York Central "	74	1,159,228	953,370	2,221,068	90,315	35,214	none	57
Old Colony	45	1,964,070	295,038	2,293,534	374,897	122,866	none	6 1/2
Taunton Branch..... "	11	250,000	none.	307,136	159,788	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	5 1/2
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	0
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	6
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	4
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	15
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	15
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,289	10	20
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	423,173	7	90
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	54
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progress	.....	.....	none	55
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	30
Canandaigua and Niagara F.. "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna..... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	68 1/2
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	64
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	49
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	02 1/2
Ogdensburgh (Northern)..... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	19
Oswego and Syracuse..... "	35	350,000	206,000	633,598	92,353	46,072	.....	70
Plattsburg and Montreal.... "	23	174,042	181,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga..... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington..... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	80
Troy and Rutland..... "	32	237,690	100,000	339,775	Recently opened.	.....	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	93
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	18
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	31
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	15
Harrisburgh and Lancaster... "	36	830,100	713,227	1,702,523	265,327	106,320	8	5
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	1 1/2
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	4 1/2

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipment.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton..... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	62
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..... "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac..... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	99,077	10	50
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	42,736	none	98
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	89,776	12	.....
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	.....	.....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina..... S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia..... "	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,635	8	.....
Alabama and Tennessee River..... Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point..... "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia..... Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..... "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	.....
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	.....	63
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	80
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh..... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	81½
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	91
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	116
Columbus, Piqua and Indiana..... "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton..... "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie..... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley..... "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77½
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine..... "	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati..... "	90	1,128,486	1,289,000	1,869,932	.....	.....	.....	76
Lafayette and Indianapolis..... "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru..... "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	70
Terre Haute and Indianapolis..... "	72	632,887	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	126
Michigan Southern and Ind. N. Mich..... "	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	112½
Michigan Central..... "	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	108½
Pacific..... Mo.	38	.....	non	In progress	Recently opened.	.....	.....	.....

Railroad Consolidation.

The stockholders of the Old Colony and Fall River Railroads met on the 4th inst., and voted to unite the two roads, thus forming a continuous line with New York by the steamers via Fall River. In the Old Colony meeting the vote was unanimous, but in the Fall River there was a little opposition.

Sale of Harlem Bonds.

The great sale of the Bonds of this Company took place on the 10th inst. The bids ranged from 92, 33, to 95, 27. The bonds are secured by a first mortgage on the whole road, and are a first-rate security.

Maysville and Lexington Railroad.

The following gentlemen have been elected Directors of the Maysville and Lexington Railroad Company for the ensuing year, viz: Henry Waller, President. A. M. January, C. Shultz, Maysville; F. T. Hord, T. M. Forman, Mason County; William Nun—Bourbon county; George Robertson—Fayette county. Gen. Forman and Judge Robertson are new members.

Debt of Milwaukee.

The debt of Milwaukee is \$1,216,050, nearly all of which has been caused by loans to various Railroad Companies connecting that city with the interior.

Lewiston and Topsham Railroad.

At a meeting of the stockholders of this road at Topsham on the 1st inst., the following board of directors was elected, to wit:

Francis T. Purington, Topsham; Oliver Moses, Geo. W. Kendall, S. A. Houghton, and Wm. M. Rogers, Bath; Henry J. Holland, Webster; Chas. Farnsworth, Lisbon.

The board was subsequently organized by the choice of F. T. Purington, president, and H. W. Owen, of this city, clerk and treasurer.

Cincinnati Hamilton and Dayton Railroad.

The following named gentlemen have been re-elected Directors of this company for the ensuing year:

S. S. L'Hommideu, John C. Wright, A. M. Taylor, George Carisle, Sam'l. Fosdick, Edwin B. Reeder, Cincinnati; John Woods, Hamilton; Simon Gebhart, Dayton; Jos. B. Varnum, New York.

Locomotives for Sale.

We advertise, in our paper of to-day, two locomotive engines for sale. They are not considered sufficiently heavy for the work for which they were ordered for sale, without having been moved from the manufactory. They are of first class workmanship, and will be sold at a bargain.

Public Debt of the U. S.

According to the Report of the Secretary of the Treasury, the purchase and redemption of the National Debt since March 4, 1853, has been as follows:

The principal of the debt paid..... \$18,873,714
Premiums paid on same..... 2,657,902
Principal of Debt now standing..... 50,315,872

Virginia and Tennessee Railroad.

This road, it is believed, will be completed to New River, one hundred miles from Lynchburgh, by the first of June. In this distance the two great mountain ranges of the State, the Alleghany and Blue Ridge, are crossed, New River being a tributary of the Kanawha.

South Side Railroad.

It is expected that the South Side Railroad will be completed to Lynchburgh in September next.

Iron Bridges.

The result of a failure of an iron bridge, some years since, upon the Erie Railroad, coupled with the accidental circumstance, it is believed, that a patent owned by an officer of the company, embraced a wooden super structure, has prevented the adoption of iron bridges upon that line. The Baltimore and Ohio and Pennsylvania Railroads, however, have used iron spans for a long time with undoubted safety. Both of these roads have been fortunate in their possession of home talent, competent to produce the best examples of this kind of engineering, Herman Haupt, Esq. of the Pennsylvania, and Albert Fink and Wendall Bollman, Esqrs., of the monuments of their skill in this line. Mr. Haupt, Baltimore and Ohio road, has erected substantial especially, has become widely known for his scientific researches in the science of bridge construction. His opinion of iron bridges, as expressed in his late report, is worthy of attention.

"The bridges on the mountain division (of the Pennsylvania Railroad) have been constructed of iron, upon plans which are perfectly reliable.—With a proper distribution of material, the cost of an iron bridge does not greatly exceed that of a wooden structure, and if properly proportioned, is more safe and preferable in every respect. The failures that have occurred upon other roads were the result of defective proportions, and of weakness that a calculation should have exposed. Iron, where properly used, is more safe than timber, and I am decidedly of the opinion that none of the bridges on the Pennsylvania Railroad should be rebuilt with wood—iron should be substituted in every case when renewals are required."

Six spans of double track, wrought and cast iron truss bridges for the mountain division, and a three-span boiler-plate bridge for the same division, have been built during the past year at the company's workshops at Altoona.

Railroad "Runners."

We are pleased to see in the report of the Pennsylvania Railroad Company, a decided disavowal of the system of employing "runners" in the Western towns, to influence passengers over their route. This system, which has been long practiced to the discredit of several competing companies, is one which no respectable tradesman would adopt to procure customers. It is annoying to travelers and expensive to the companies. It is also irregular in principle, and leads to a loose system of collections and of accountability on the part of the agents. It is a system which parades all the defects of every road before the traveling public, and in a manner which often shakes their confidence, unnecessarily too, in all the routes in the field.

Much of the through passenger business, of several of our leading roads is obtained under the operations of this system. We have been enabled to show the profits (?) of this class of patronage to the Erie road, and no doubt could establish a similar result in the case of other roads if their reports but supplied the materials for a comparison.

Under this view we are more pleased to learn that the Pennsylvania road has secured a large and profitable through business, without any considerable resort to this system. The report says.

"The through business of our Road has increased with astonishing rapidity, and at this time exceeds that of the New York and Erie Railroad—

While it has not cost us as much to obtain it as we have received from it—as appears from the statements of that company to have been the result of their past experience. The expediency and utility of maintaining an army of noisy drummers throughout the West, has always been doubted by this Company, and practiced only to a limited extent. It is therefore gratifying to find that the experience of our neighbors has justified our own conclusions upon this subject. Information in relation to the facilities of the route can be disseminated less expensively and more efficiently through other means. The fact that our line has commanded a remunerative business with impediments at its centre equivalent—as regards time—to an increase of its length of nearly 200 miles, shows that it has not been unknown to the traveler."

Mississippi and Atlantic Railroad.

This company having at last obtained a charter from the State of Illinois, Mr. Brough, the President, has issued a circular to the stockholders, giving a brief history of the legislative proceedings in reference to the above company, with statements of the opposition encountered from interests adverse to his own, and of the present condition of the company's affairs.

The principal opposition is represented to have come from the *Terre-Haute and Alton* interest. In the year 1852, a charter to the Mississippi and Atlantic Company was refused, and again in 1853, both which results were openly and avowedly (as affirmed by the circular) effected by the friends of the *Terre-Haute and Alton*, and the Ohio and Mississippi companies. In the spring of 1853, however, negotiations having been made for the completion of the Ohio and Mississippi road, opposition from that source was, in consequence, withdrawn. The former opposition however continued, on the ground, as is asserted, that the faith of the State was pledged, by former refusals of a charter to the Mississippi and Atlantic Company, as interfering with the interests of the *Terre-Haute and Alton* road.

The bill granting the charter was, however, passed by the decisive vote of 53 to 18 in the House, and 15 to 8 in the Senate.

The opposition to the road still continued. As soon as the charter was obtained, a legal opinion, by certain "jurists" of Illinois, was procured, to the effect that the charter was invalid, because the company was not so formed as to come within the provisions of the Governor's proclamation convening the Legislature; and a writ of *quo warranto* was served upon the Company. The case was heard on the 19th April, before the highest legal tribunal of the State, judgment entered of dismissing the writ, and re-affirming the rights and powers of the company.

The roads from Cleveland to *Terre-Haute* are now completed, and running regular trains; and as soon as this remaining link is added, the connection will be complete to and from St. Louis. The distance from *Terre-Haute* to St. Louis by this road is set down as 162 miles—the route exceeding by less than one mile an air line.

A table of comparative distances between different points with other roads, is given in the circular, which it may be interesting to refer to. The distance on the line of the *Wabash Valley* road from Toledo to Lafayette, and on the contemplated line from thence to Paris, Illinois, have been taken

according to the line of the canal, and the traveled roads, confirming them by minimum measurements on maps.

1. Cleveland to St. Louis, by Central Route, embracing our Road.

Cleveland to Galion,.....	79 miles.
Galion to Union,.....	118 "
Union to Indianapolis,.....	84 "
Indianapolis to Terre-Haute,.....	72 "
Terre-Haute to St. Louis,.....	162 "

Total,..... 515 miles.

1. Cleveland to St. Louis, via Toledo.

Cleveland to Toledo,.....	112 miles.
Toledo to Lafayette,.....	214 "
Lafayette to Paris,.....	80 "
Paris to Alton,.....	155 "
Alton to St. Louis,.....	25 "

Total,..... 586 miles.

Deduct Central Route,..... 515 "

Difference,..... 71 miles.

2. Cleveland to St. Louis, via Chicago.

Cleveland to Toledo,.....	112 miles.
Toledo to Chicago,.....	242 "
Chicago to Joliet,.....	40 "
Joliet to Alton,.....	220 "
Alton to St. Louis,.....	25 "

Total,..... 629 miles.

Deduct Central Route,..... 515 "

Difference,..... 124 miles.

4. Air-Line from Cleveland to St. Louis, (as contemplated though not commenced.)

Cleveland to Paris,.....	342 miles.
Paris to Alton,.....	155 "
Alton to St. Louis,.....	25 "

Total,..... 522 miles.

Deduct Central Route,..... 515 "

Difference,..... 7 miles.

5. Cleveland to St. Louis, via Cincinnati.

Cleveland to Columbus,.....	134 miles.
Columbus to Cincinnati,.....	118 "
Cincinnati to St. Louis,.....	344 "

Total,..... 596 miles.

Deduct Central Route,..... 515 "

Difference,..... 81 miles.

6. St. Louis to Cincinnati.

By Ohio and Mississippi road,.....	344 miles.
By our route to Indianapolis,.....	234 miles.
Indianapolis to Cincinnati,.....	109 "

343 miles.

Difference,..... 1 mile.

7. St. Louis to Philadelphia.

Our route to Galion,.....	436 miles.
Galion to Philadelphia,.....	546 "

Total,..... 982 miles.

The contracts for the whole line of the road, have been let; although all the plats of location had not been filed at the time of the issue of the Circular, for the reason that some changes in the location were deemed advisable, and were being made at the time.

Annexed to the Circular, is a letter from W. Milnor Roberts Esq., Chief Engineer of the Bellefontaine and Indiana, and Alleghany Valley Railroad, who in company with Mr. Eaton, Chief Engineer of the Mississippi and Atlantic Road, has minutely examined the line of the latter, and has given his views of its business capabilities, &c., &c. He states the alignment of the road to be exceedingly favorable.

Dayton and Michigan Railroad.

The second Annual Report of the above Company presents the following exhibit of the condition of the company's affairs.

At the time of the first Report, means for the construction of the road, and the iron, had yet to be raised; and no accurate survey nor effort to raise stock had been made, north of Sidney. The road was then in its infancy. Since that period, says the Report—

Though disappointed in the receipt of our iron, part of which arrived at Toledo too late for shipment before the close of navigation in 1852, and therefore had to await the completion of the T., N. and C. R. R. before it could be forwarded; and though further delayed several weeks by reason of damage done by the December flood to the pier of our bridge over the Miami River, we completed the twenty miles under contract by the first of May, 1853, within a period shorter than that usually occupied in the construction of an equal amount of railroad.

The receipts of this twenty miles have averaged about \$2,500 per month; nearly all from travel alone, as the regular freight business has not yet commenced.

The mortgage bonds of the Company have been sold at rates to compare favorably with other roads, through their agents, Messrs. Winslow, Lanier & Co., of New York, and from these proceeds the iron has been paid for.

Upon the opening of the road, it was operated by the Cincinnati, Hamilton, and the Dayton Railroad, by which arrangement the purchase of equipments was at first dispensed with. At the present time the Company is operating with its own machinery.

The capital stock subscribed, is \$1,500,450—a sum sufficient to construct the road, and furnish a large amount of rolling machinery.

Of these subscriptions there are in convertible seven per cent. County, City, Town and Township Bonds, \$323,000 00. In cash and real estate which has already been made available as cash, \$880,000. In Real Estate, \$297,450 00.

The County, City, Town and Township Bonds have all been negotiated—those of Miami County at par, and the residue at a little less.

Since the first exhibit, a contract has been entered into with Messrs. Doolittle and Shoemaker to build and equip the Road entirely, and to deliver it ready for immediate use, from Troy to Toledo, on or before the 1st of June, 1855.

This contract embraced the *Turtle Creek* route, leaving Sidney to the east some four miles. Sidney being named for a point in the line in the charter, an injunction was granted against this departure. During the pending of the injunction, the citizens of Sidney increased their subscriptions to the stock of the Company to \$189,000, and J. W. Carey, of Sidney, proposed to build 14 miles from Piqua north, through Sidney, for the above amount, and take the subscriptions in payment. This proposition was accepted, and the road to Sidney is to be completed by the 10th of July next, and the balance by the time the contract of Messrs. Doolittle and Shoemaker is performed. The south end of the Road to Piqua is completed, ironed and ballasted. Fifty miles from Toledo south are nearly ready for the iron, and the work is going on. The right of way is secured over nine-tenths of the distance; and although there is some difficulty with the balance, it is hoped it will be soon overcome.

To purchase iron for superstructure, &c., the

Company first issued bonds secured by a mortgage on said road to the amount of \$1,000,000, payable in New York in fifteen years; but subsequently found this sum inadequate, in consequence of the advanced price in iron, &c., to meet the wants of the Company, they have therefore cancelled \$700,000, and made a new mortgage upon the extra line of the road, depot grounds, franchises, and personal property of the Company for \$1,500,000, and have issued their bonds of \$1000 each, payable in twenty years, with seven per cent interest, payable semi-annually, principal and interest payable in New-York, and convertible into the stock of the Company at any time in ten years, at par.

An arrangement has been entered into between the D. & M. and the C. H. & D. R. R. roads, by which an entire line of uniform gauge is effected between Cincinnati and Toledo, a distance of 198 miles; and the latter Company guarantees to the former, for twenty years, the exclusive business of their Road between Cincinnati and Toledo, and to discriminate in their favor against competing roads. The Road is the shortest railroad line between the Lakes, with lower gradients by nearly one-half, and less curvatures by more than one-half, than any other road between Cincinnati and the Lakes.

A company has also been organized under an old charter in Michigan, to continue the D. & M. Road with the same gauge, from Toledo, or the State line, to Detroit; making a distance of 256 miles from Cincinnati to Detroit.

The Fort Wayne and Chicago Railroad, now well advanced towards completion, will, with the G. and I. R. R., now nearly finished, with the same gauge as the D. and M. road, form a chain of uniform gauge from Cincinnati to Chicago, by way of Lima and Fort Wayne. The Fremont and Indiana Company have also under contract, to be completed within eighteen months, their road from Lima to Fremont, and eventually to be extended to Sandusky City.

So there is formed over the Dayton and Michigan road, from Dayton to Sidney—a direct and continuous line of railroads, of uniform gauge, from Cincinnati, by the way of Sidney and Gallion, to Cleveland, not longer, but with less curvatures and lower grades than that of the C. C. & C. R. R.

The distance from Cincinnati to Cleveland by this line is 259 miles, as against 255 miles between the same points v'a the Columbus route. The difference in length is more than made up by the low grades on this line.

By means of the same road with the O. & P. R. R., there is formed over the same portion of our road another continuous line from Cincinnati, by the way of Sidney and Pittsburgh, to Philadelphia, without crossing the *Ohio River*, capable of being run in as short a time as any other line between those points.

Over the northern portion of this road, from Sidney to Toledo, there is formed another line, by means of the B. & I. R. R., from Indianapolis, through Canada, to New York and Boston.

The Dayton and Michigan road from Dayton to Toledo, connects with, or is intersected by no less than twenty railroads; the combined aid of which it would seem, cannot fail to make this a heavy business road.

In the report of Mr. T. S. Huntington, Engineer,

the grades with their distances, between Dayton and Toledo are as follows:

The maximum grade on the above line is generally twenty-one feet per mile, but it has been found necessary at a few points to increase it to twenty-six feet per mile.

TABLE OF GRADES.

Between level and 5 feet per mile,....	84 miles.
" 5 feet and 15 feet per mile,....	23 "
" 15 feet and 31 feet per mile,....	25 "
" 21 feet and 26 feet per mile,....	8 "

Whole distance,..... 140 miles.

Sum of ascents going north,..... 675 feet.

Sum of ascents going south,..... 725 "

The entire length of curved line from Dayton to Toledo is nine miles. The total amount of curvature is 650 degrees. About one-half of the curved line has a radius of 5,730 feet, and the remainder not less than 2,865 feet, which is the minimum radius employed. The curves occur mostly in the immediate vicinity of towns.

It will be seen by reference to the following table, showing the respective proportions of curved and straight lines on most of the prominent Ohio roads, how this line will compare with others in this important feature.

NAME OF ROADS.	PROPORTION OF CURVED LINE TO WHOLE DISTANCE.
Cleveland & Columbus,.....	1 to 10
Cleveland & Pittsburgh,.....	1 to 4
Mad River & Lake Erie,.....	1 to 8
Little Miami,.....	1 to 3
Cincinnati, Hamilton & Dayton,....	1 to 4
Dayton & Western,.....	1 to 10
Cincin., Hillsborough and Parkers-	
burgh,.....	1 to 5
Bellefontaine & Indiana,.....	1 to 12 1/3
Dayton & Cincinnati, (short line)... 1 to 3 1/3	
Dayton & Michigan,.....	1 to 16

This road, then, as it appears from the above comparison, is superior to all others in the list, in point of alignment.

The road stands equally favorable as to grades, the maximum grade upon nearly all the long roads in the State being about double that adopted on this. The D. and M. road, in connection with the Cincinnati, Hamilton and Dayton railroad, will occupy some of the finest country in the State of Ohio. The northern portion, perhaps, is yet much of it thinly settled and undeveloped; but the effect of this road will be to open a channel through its forests and prairies, and draw out its vast resources. The line is located through all the county seats of the counties traversed by the road, with one exception, Putnam county.

The probable cost of the road, and the means provided for the same, are stated to be as follows:

Grading, masonry and bridging for 120 miles, and ballasting 60 miles at contract price, \$850,265	
Ballasting the remaining 60 miles,....	90,000
Superstructure, including iron and side track,.....	1,105,000
Equipments,.....	309,000
Right of way and land damages,.....	60,000
	2,405,265

To which we add the cost of the road now built from Dayton to Troy,....	396,635
Locomotives and cars now on the road,....	60,000
Right of way from Dayton to Troy;....	8,500
Depot and depot grounds, water stations and engine houses for the whole line,....	75,000
Contingencies, including engineering, officers' salaries and incidental expenses,.....	75,000
	\$3,020,400

WAYS AND MEANS.

Capital stock paid in,....	\$922,703 50
Capital stock not paid but considered good,.....	577,746 50

Proceeds, \$304,000 Bonds sold, and \$1,200,000 contracted for iron and machinery, 1,288,000 00
Bonds not sold, 296,000 00
\$3,084,450

The line of the above road is identical with that of the Miami Canal, which is now the chief medium of communication between Cincinnati and the Lakes, and the Eastern States. It occupies, therefore, one of the great business routes in Ohio. For one-third of the year, it will be the only channel of communication for this business, and for the remainder it will take the passenger traffic and the more profitable freight, which of themselves will supply a lucrative business. Experience has fully shown that a canal and railroad over the same route mutually aid each other, instead of leading to an injurious rivalry.

The above road traverses one of the best portions of Ohio. The connections it will make are exceedingly important, and the project deserves to rank among the first-class roads of Ohio.

Nashville and North-western Railroad Tenn.

The following is a list of the Board of Directors of this company:

John A. Gardner, President; H. L. Claiborne, Secretary and Treasurer. Directors: Jos. H. McEwin, Michael Burns, John B. Johnston, R. C. McNairy, W. F. Cooper, Davison county, Jas. L. Bell, Dickson county; Thos. Wyly, Humphreys county; Wm. Fitzgerald, John W. Blanton, Henry county; Jeptha Terrel, W. W. Gleason, Weakley county; Geo. H. Carey, Wm. Wyatt, Wm. B. Isler, Obion county.

The line of this road commences at Madrid Bend, on the Ohio, in Obion county, passing eastwardly, and crossing the Mobile and Ohio road, in the same county, thence, via Dresden and Reynoldsburg to Nashville. The company has the advantage of "state-aid" in conjunction with other roads. The line will shortly be under contract, a portion of it in July.

Maysville and Lexington Railroad.

The work upon this important road has been suspended in consequence of the inability of the company to secure means for its prosecution. The president and directors have been requested to visit the cities of Louisville and Lexington, and confer with the councils of those cities, and the boards of directors of the Louisville and Lexington, and Lexington and Frankfort Railroad Companies, and urge upon them the importance of an endorsement of the bonds of the company to an amount not exceeding four hundred and fifty thousand dollars.

Ohio Central Railroad.

The portion of this road between Jamesville and Cambridge has been opened for business.

According to the late report of the company, the whole expenditure for the entire completion of the road, provision of machinery, rolling stock, and contingencies is estimated at \$4,661,557; and its resources consist of capital stock \$1,808,347; mortgage and income bonds, and surplus real estate \$2,600,000,—add balance to represent floating debt, \$353,210, and we have the total of \$4,661,557. This apparent balance may be increased by the accrual of interest and the discount upon unsold bonds to nearly \$600,000.

Cleveland and St. Louis Railroad.

The Cleveland Leader says that this road has been put under contract (in Ohio) to Messrs. A. De Graff, E. C. Frost & Co., of Dayton, at \$24,000 per mile, including a large equipment. \$10,000 worth of station buildings, and all the masonry to be constructed for a double track. They are to take 65 per cent. in the stock and bonds of the company.

Alexandria, Loudoun and Hampshire Railroad.

The stockholders of this company, at the meeting held at Alexandria on the 12th ult. decided to adopt the Keyes' Gap route and to locate the road immediately as far as the Shenandoah river. The line adopted will pass by Sunbury, through Clarke's Gap in the Catoctin Mountain, Hillsborough Gap in Short Hill and thence up the eastern slope of the Blue Ridge to its summit at Keyes' Gap; it descends the western slope in an oblique direction to the south, and reaches the Shenandoah river at the mouth of Long Marsh Run; crossing it ascends the valley of the Highlands immediately North-west of the town of Berryville, descends the valley of Dry Marsh Run to Obepon Creek, crosses the latter and descends the valley of Red Bed Run to the neighborhood of Winchester, leaves Winchester one mile to the south, thence &c., to Piedmont, on the Baltimore and Ohio Railroad. The distance from Alexandria to Piedmont by this route is 175 miles—maximum grade from Piedmont 52 8-10 feet per mile, to Piedmont 79 2-10 feet per mile; maximum radius of curvature 1,000 feet; cost of construction estimated at \$8,182,100 or an average cost per mile of \$46,800. The estimate is for a road with grading, tunnelling, culvert masonry and bridge masonry for a double track, and railway for a single track, with water houses and depot buildings for a trade of 1,000,000 tons. The estimated cost of the Snicker's Gap route is \$8,360,300. Difference in favor of the route adopted \$178,200 on first cost and two years in time necessary to construct.

Sandusky Mansfield and New York Railroad.

Mr. D. N. Barney, trustee, gives notice that the railroad corporations heretofore known by the names of the Mansfield and Sandusky City Railroad Company and the Columbus and Lake Erie Railroad Company having, in pursuance of the laws of the State of Ohio, become one consolidated corporation, under the name of the Sandusky, Mansfield and Newark Railroad Company, the bonds of either companies may be exchanged for a corresponding amount of the bonds of the consolidated Company, secured by a mortgage of the property and franchises of the whole consolidated road, at No. 82 Broadway.

South Side Railroad.

The Farmville Journal understands the laying of the track on the S. S. Railroad will be completed to Davis', about ten miles this side of Farmville, next week, when the cars will run to that point. The remaining unfinished portion of the road, 41 or 42 miles, will be in readiness for the cars, it is supposed, by the last of September.

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 8½ in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12½ in. by 20, with a separate cut-off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 spruce st., N.Y. 19tf

MR. WILLIAM NAISH, of Newport, Mammouthshire Inspector of rails, begs most respectfully to acquaint importers of rails, engineers and others connected with the railroads of America, that he still continues to execute orders of inspection, throughout the various districts of South Wales and adjacent Iron works, and confidently refers to the satisfaction which his supervision has given during the last ten year to exporters of rails, and others below named; as a proof of the fidelity, carefulness and promptitude of his inspections.

BARING BROS. & CO., London.
PALMER, McKILLIP, DENT & CO., London.
LEWIS HOPE, Esq., "
COLLMAN & STOHLTERFORTH, "
HON. JAS. WADSWORTH, Buffalo New York.
JAMES SPENCE, Esq., Liverpool. "
NAYLOR, VICKERS & CO., " 19 tf

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 grate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BROS.,
48 Fulton st., New York,

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors Compasses Manufactured on the most improved principle and of the Best Quality by THOMAS HUNT, No. 53 Fulton Street, New York.

Railroad Iron.

2000 TONS Railroad Iron, weighing about 59 lbs. per yard, "Erie" pattern of G. L. and Crawshaw's manufacture, now on the way from the shipping ports in Great Britain to this port, for sale by P. CHOUTEAU, Jr., SANFORD & CO., December 4, 1882. No. 51 New street.

To Railroad Companies and Contractors.

SECOND hand engines for sale in good running order and condition.
2 engines, 10 in. x 20 in. cylinder, 4 drivers 54 inch diameter, about 16 tons weight.
2 engines, 10 in. x 18 in. cylinder, 2 drivers 54 inch diameter, weight about 14 tons.
For terms, &c. apply to
CLARK & JESUP,
General Railroad Agents,
38 Exchange Place.
4t16

Brass Tubes for Locomotive and Marine Boilers.

THE undersigned having been appointed Agent for the highest respectable manufacturers Messrs. Allen, Everitt & Son or Birmingham, is prepared to take orders, at fixed prices, for Brass Tubes of all diameters, for Engines.—For further particulars and inspection of patterns, please apply to
JOHN H. HICKS,
90 Beaver str.
March 1884.

C. Floyd-Jones,

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD,
Vandalia, Ill.

DIVIDEND NOTICE.—The SEMI-ANNUAL INTEREST falling due in this city on the first day of May next, on the following named securities, will be paid on and after that date at the office of the undersigned on presentation of the proper coupons, viz:

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland and Pittsburgh Railroad Company 7 per cents.

The Bonds of the City of Cleveland, (Ohio,) issued to the Cleveland, Painesville and Ashtabula Railroad Company 7 per cents.

The Bonds of the City of Madison, (Indiana) 6 and 7 per cents.

The Bonds of the City of Pittsburg, (Penn.) issued to the Allegheny Valley Railroad Company (payable on the first Monday of May next,) 6 per cent.

The Madison and Indianapolis Railroad Company First Mortgage Bonds, 7 per cent.

The Sciota and Hocking Valley Railroad Company First Mortgage Bonds, 7 per cents.

The Indiana Central Railroad Company Mortgage Bonds, 7 per cents.

The Wilmington and Manchester Railroad Company Second Mortgage Bonds, seven per cents.

New York, April 29, 1884.

WINSLOW, LANIER & Co., No. 52 Wall-st.

Boiler and Tank Rivets, Nuts and Washers;

All Sizes of
Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

Notice to Bridge Builders.

Proposals will be received until Monday June 3 at the Engineers Office, Huntingdon Pa. for the superstructure of Bridges on Trestle Works, of the Huntingdon and Broad Top Railroad.—Plans and specifications will be exhibited at the office, or Contractors may present their own plans with their bids.

S. W. MIFFLIN C. Engineer.
Huntingdon May 6 1884, 4t

RAIL ROAD CAR FINDINGS, BRIDGES & BROTHER,

64 Courtlandt Street, N. Y.

**WHEELS AND AXLES,
JAWS, BOXES, AND CASTINGS FITTED.
WROUGHT NUTS, BOLTS AND WASHERS,
ENGINE AND CAR SCREW BOLTS, all SIZES,
COACH LAG AND TELEGRAPH SCREWS,
LOCOMOTIVE ENGINE LANTERNS,
From the BEST Manufacturers and at their Prices.
CAR, HAND and SIGNAL LANTERNS.
COTTON DUCK, FOR CAR COVERING,
of any required width to 124 inches.**

**ENAMELED HEAD LININGS,
The best article made in this country.**

**PLUSH, and CURLED HAIR.
HAND CARS AND BAGGAGE BARROWS.**

**PASSENGER, FREIGHT-CAR, AND SWITCH
LOCKS, DOOR KNOBS AND BUTTS.**

BRASS and IRON WOOD SCREWS.

BRASS and SILVER PLATED TRIMMINGS

For Windows and Seats.

VARNISH, COACH JAPAN, AND GLUE,

Paints, Varnish and Glue Brushes.

SILVER PLATED AND WHITE METAL LETTERS.

ENGINE and SIGNAL BELLS.

ANTI-FRICTION, OR BABBITT METAL.

PORTABLE FORGES & JACK SCREWS.

HEMP PACKING, AMERICAN, RUSSIA AND ITALIAN.

CONDUCTOR'S BADGES AND BAGGAGE CHECKS.

Iron Bronzed and Brass Hat Hooks.

VENTILATORS AND WHITE METAL RINGS,

And all other Articles pertaining to Cars.

ALBERT BRIDGES, Late Davenport & Bridges, Car Manufacturers, Cambridgeport, Mass.

ALFRED BRIDGES, Late Davenport, Bridges & Co., Fitchburg, Mass.

To Contractors.

The Virginia Central Railroad Co. proposes to contract for taking up about 36 rails of superstructure now laid with the strap rail, and relaying with a heavy rail, the contractor furnishing every thing except the ties which will be distributed by the company.

Sealed proposals will be received at the office of the company in Richmond, until the 24th day of May next, at 9 o'clock.

The Rail to be used must weigh from 55 to 60 lbs. to the yard. Payments to be 50 per cent. cash, and 50 per cent. in the Bonds of the company running 30 years, and secured by a mortgage on the whole property of the company.

Specifications may be obtained at the Engineer's office at Richmond, after the 10th day of May.

CHARLES ELLET, Jr.

Chief Engineer.

April 26th 1854.

St. 18

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,

European, American Employment Office,

287 Broadway, corner Reade-st.

3m*10 Under the Irving House, New York.

LOAN OF THE MORTGAGE BONDS OF THE NEW YORK AND HARLEM RAILROAD COMPANY.

This Company will receive proposals for one million seven hundred thousand dollars of their First Mortgage Bonds, issued in sums of one thousand dollars each, payable at the office of the Company, in the City of New York, on the first day of May, 1873, with coupons attached for the payment of interest at the same place semi-annually, on the 1st of May and 1st of November, at the rate of seven per cent. per annum.

These Bonds are secured by a First and only Mortgage, to Thomas W. Ludlow and R. M. Blatchford, Trustees, on the road and its appurtenances; made under special authority of an Act of the Legislature and vote of the Stockholders.

The whole amount of Bonds which can be issued under the Mortgage is \$3,000,000, and will be the first and only lien upon the road, and will constitute the sole debt of the Company. The Company reserve \$1,300,000 of this Mortgage for the exchange of all the outstanding plain Bonds of the Company now in existence, and propose to dispose of the residue, One Million Seven Hundred Thousand Dollars, for the purpose of discharging all their floating debt, and of payment of the expenditure necessary for the full completion of the improvements now in progress upon the road.

The capital of the company paid in is \$1,500,000 of Preferred Stock and \$3,600,000 of Common Stock, upon which regular dividends have been earned and paid for the last five years of Eight (8) per cent. per annum on the former and Four (4) per cent.) on the latter.

The receipts of 1853 amounted to 964,467, being an increase of twenty-six (26) per cent over 1852, and there is no doubt a still larger business will be done the present year.

The public have therefore now offered them a home security of the most reliable character.

The Acceptances of the Company will be received in payment for the Bonds.

Twenty (20) per cent, is required to be paid on acceptance of bids, and Twenty (20) per cent. every thirty days thereafter, for which Bonds will be given; Ten (10) per cent. however of the first instalment being reserved by the Company until completion of the contract; interest to be adjusted from the 1st of May.

Parties have the privilege of making payment in full and receiving their Bonds.

Sealed Proposals will be received at the office of BLATCHFORD & RAINSFORD, No. 58 Wall street, on or before the 10th day of May next, at 3 o'clock P M.

LOCOMOTIVE ENGINES.

**A. & W. Denmead & Son,
BALTIMORE, MD.**

HAVING THEIR IRON FOUNDRY & MACHINE SHOP in complete operation, are prepared to execute, faithfully and promptly, orders for

Locomotive or Stationary Steam Engines,
Woolen, Cotton, Flour, Rice, Sugar, Grist or Saw Mills,
Machinery for cutting all kinds of Gearing,
Hydraulic, Tobacco, and other Presses,
Car and Locomotive patent Ring-Wheels, warranted,
Bridge and Mill Castings, of every description,
Gas and Water Pipes, all sizes, warranted,
Railroad Wheels, with best flanged axle, furnished and fit up for use, complete.

Estimates for Work, in any part of the United States, furnished at short notice. ap.14-15

Krupp's Best Cast Steel.

SUITABLE FOR

MINT AND PLATERS' ROLLERS.

ALSO of large size (72 by 18 inches diameter) for rolling Iron, Copper or Brass.
Pistons of Steam Engines and Shafts for steamboats, not exceeding six tons weight in one piece.

Also the celebrated

CAST STEEL AXLES AND TIRE

made from a solid bar without welding. Agents

THOMAS PROSSER & SON,
28 Platt street, New York.

Railroad Iron.

470 TONS 47 lbs. per yard of best quality now in store at New Orleans. For sale by

VOSE PERKINS & CO
5 South-William street.

Notice to Contractors.

Proposals will be received for all the heavy work on the Blue Ridge Rail Road, South Carolina; Blue Ridge Rail Road, Georgia; Tennessee River Rail Road, North Carolina; Knoxville and Charleston Rail Road Tennessee. The above lines of rail-way are consolidated and under the management of one Company, Extending from Anderson South Carolina, via Clayton, Georgia, Franklin North Carolina, to Knoxville Tennessee, a distance of 194 miles. That part of the road from Anderson South Carolina, to the Turniptop Mountain, a distance of 40 miles is principally earth excavation, of about equal quantities of cut and fill, with several bridges. From the Turniptop Mountain to the Rabun Gap, a distance of 24 miles, the work is very heavy, there being on the line one tunnel of 5800 feet, one of 1400 feet, and one of 400 feet in length; a suspension bridge across the Chatanga River 500 feet long, with some very heavy earth and rock cuts. The rock in the Tunnels is gneiss stratified. From the Rabun Gap to twenty miles below Franklin, a distance of 50 miles, the line follows down the Tennessee River; the class of work is principally side hill excavation, some of which is rock; their will also be several bridges. From the point 20 miles below Franklin to Hardens, a distance of 35 miles, the line follows the Tennessee River the entire distance, causing heavy side rock excavations. On this portion of the line will be several expensive bridges, and a tunnel of about 1000 feet. From Hardens to Knoxville, a distance of 45 miles, the line follows the river about eight miles, then leaves it, running across the Chilhona mountains almost a north line to Knoxville; this portion of the road is heavy work, with about equal quantities of cut and fill, an expensive bridge 1000 feet long and 45 feet high, crossing the Holston River at Knoxville. The character of the rock from Knoxville to Hardens is limestone, and from Hardens to Franklin gneiss rock stratified, and from Franklin to Anderson, stratified sand stone and gneiss rock. The character of the earth is sandy and clay loam. The line for the whole distance runs through high table lands, well settled, remarkable for its health, good water and ample resources for subsistence. The above line of rail-way offers great inducements to experienced contractors. The undersigned will be prepared to receive proposals and enter into contracts for the graduation, bridging, tunneling and masonry for the heavy portion of the line, from and after the 1st day of May next, at Knoxville Tennessee, Franklin North Carolina, and Pendleton South Carolina, and will continue at such places, until the same is under contract. Profiles and maps of approximate location can be seen at each of the above places after the 1st day of May. Proposals are asked with cash payments, also eighty per cent cash and twenty per cent in the Capital Stocks or Bonds of the Company. All communications prior to may 1st must be addressed at Pendleton South Carolina.

4,13

ANSON BANGS & Co.

To Contractors.

PHILADELPHIA, WILMINGTON AND BALTIMORE RAILROAD OFFICE.—PHILADELPHIA, April 21st, 1854.—PROPOSALS will be received at this office until May 25th, 1854, for driving the piles, protecting the foundations, and for the Masonry above and under water, of the proposed Bridge across the Susquehanna River at Havre-de-Grace, Maryland.

Also, for the Grading and Masonry of the new location of the Road adjoining the Bridge, and of the Port Deposit Branch Railroad.

Plans, profiles and specifications may be seen at the Engineer's Office, in Havre-de-Grace.

S. M. FELTON,

Pres. P. W. and B. B. R.

17,4t

Railroad Iron For Sale.

ABOUT 800 tons Rails of most approved Welsh patterns, for sale by
CLARK & JESUP,
38 Exchange Place, New York.

M. W. BALDWIN & CO., Engineers,

Broad and Hamilton streets, Philadelphia.
WOULD call the attention of Railroad Managers, and those interested in Railroad Property, to their **SYSTEM OF LOCOMOTIVE ENGINES** in which they are adapted to the particular business for which they may be required; by the use of one, two, three or four pair of driving wheels; and the use of the whole, or so much of the weight as may be desirable for adhesion; and in accommodating them to the grades, curves, strength of superstructure and rail and work to be done.—By these means the maximum useful effect of the power is secured with the least expense for attendance, cost of fuel and repairs to Road and Engine. With these objects in view and as the result of twenty-three years practical experience in the business by our senior Partner we manufacture **Five different kinds of Engines** and several classes or sizes of each kind.

Particular attention paid to the **strength of the machine in the plan and workmanship of all the details.** Our long experience and opportunities of obtaining information, enables us to offer these engines with the assurance that in efficiency, economy and durability they will compare favorably with those of any other kind in use.

We also furnish to order, Wheels, Axles, Bowling Tire (to fit centres without boring), Composition Castings for Bearings; every description of Copper Sheet Iron and Boiler work; and every article appertaining to the repair or renewal of Locomotive Engines.

M. W. BALDWIN.

MATTHEW BAIRD.

New York and Erie R. R.**PASSENGER TRAINS**

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without change of baggage or cars.
Dunkirk Express, at 7 a. m. for Dunkirk.

MAIL, at 8 1/4 a. m. for Dunkirk and Buffalo, and intermediate stations.

WAY EXPRESS, at 12 1/4 p. m. for Dunkirk.

Rockland Passengers, at 3.30 p. m. (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

Emigrant at 6 p. m.

On Sundays only one Express Train—at 6 p. m.

These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

Great Western Mail Route.

SIXTY MILES DISTANCE SAVED TO CHICAGO AND ST. LOUIS. THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD LINE, carrying the Great Western United States Through Mail, have the following staunch first-class Steamers running on Lake Erie in connection with the NEW YORK AND ERIE RAILROAD from Dunkirk, touching at Cleveland, and connecting with their Road at Toledo, and connecting directly with the CHICAGO AND ROCK ISLAND RAILROADS at Chicago, in the same Depot, thus forming a Daily Line for Passengers and Freight from New York to the Mississippi River. **NIAGARA**, Capt. Miller; **EMPIRE**, Capt. Mitchell; **KEYSTONE STATE**, Capt. Richards; **LOUISIANA**, Capt. Davenport. Also **A DAILY LINE FROM BUFFALO DIRECT TO MONROE**, by those well-known magnificent Floating Palaces, **EMPIRE STATE**, J. WILSON, Commander, leaves Buffalo Mondays and Thursdays; **SOUTHERN MICHIGAN**, A. D. PERKINS, Commander, leaves Buffalo Tuesdays and Fridays; **NORTHERN INDIANA**, I. T. PHRATT, Commander, leaves Buffalo Wednesdays and Saturdays.

One of the above splendid Steamers will leave the Michigan Southern Railroad Line Dock, at 9 o'clock, P. M. every day, (except Sundays) and run direct through to Monroe without landing, in 14 hours, where the **LIGHTNING EXPRESS TRAIN** will be in waiting to take passengers direct to Chicago in 8 hours, arriving next evening after leaving Buffalo.

Running time from New York to Buffalo.....14 hours.
 Running time from Buffalo to Monroe.....14 hours.
 Running time from Monroe to Chicago.....8 hours.

Total.....36 hours.

Connecting at Chicago with a fine line of Low Pressure Steamboats to all places north of Chicago to Green Bay; also with Chicago and Rock Island Railroad to La Salle, and there connect with Illinois River Line of Steamboats, or Express Trains of ILLINOIS CENTRAL AND CHICAGO AND MISSISSIPPI RAILROADS, or connecting at Rock Island with regular line of steamers for all points above and below, making the cheapest and most direct Route to St. Louis, Rock Island, Minnesota, and the Great West.

The **AMERICAN LAKE SHORE RAILROADS** from Buffalo and Dunkirk connect with this line at Toledo, forming the only direct and continuous line of Railroads from the Atlantic Seaboard to the Valley of the Mississippi.

Running time to Chicago, 36 hours; to St. Louis, 56 hours.

FOUR DAILY TRAINS by Railroad all the way.

TWO DAILY LINES by Steamers on Lake Erie.

Thus the Traveller and Shipper can see at a glance that no other Line can enter the lists as competitors.

Passengers Ticketed Through from New York with privilege of stopping over at any point on the route, and resuming seats at leisure, either by the New York and Erie Railroad, via Dunkirk, New York and Erie and Buffalo and New York City Railroad via Buffalo; People's Line of Steamboats, Hudson River or Harlem and New York Central Railroads, via Albany and Buffalo.

For any further information, Through Tickets, or Freight, apply at the Company's Office, No. 193 Broadway, corner of Dey st., N. Y., to

JOHN F. PORTER, General Agent, or

L. P. DUNTON, Ticket Agent.

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Railroad Iron.

THE Subscribers are at all times prepared to enter into contracts for Railroad Iron, of Messrs. Guest & Co., or other leading manufacturers' make, delivered free on board vessels in England or in this country.

Sept. 7. **BOORMAN, JOHNSTON & CO.,**
 90 Broadway, New York.

MANUFACTURERS' AGENCY

FOR

RAILROAD FURNISHING,

Office 18 Dearborn St., Chicago, Ill.

E. R. T. ARMSTRONG, Agent,

KEEPS constantly on hand Railroad Spikes, Burden's make, Railroad Wrought Iron Chairs, superior quality, Ames' manufacture of Locomotive Tires, Cranks, &c. Washburn, Pond & Co.'s Car Wheels, of best Salisbury and Stirling Iron, mixed under direction of Mr. Washburn, and warranted.

Orders invited for Locomotive and Car Rolled or Hammered Axles—Locomotive Lamps—Superior Pumps, for Stations, Switch Stands, Levers, and Targets—Locomotive Drivers and Cylinders—Boxes and Pedestals—Screw Cutters and Drilling Machines—Frog's Heads and Heel Blocks—Screw Presses, for forcing Wheels and Axles.

Oils of a superior quality, made expressly for railroads, and free from gums.

Refer to—Illinois Central railroad, Ohio and Mississippi river railroad, Michigan Southern railroad, Galena and Chicago Union railroad, Milwaukee and Mississippi river railroad, Little Miami railroad, Cincinnati, Hamilton and Dayton railroad, Central Ohio railroad. 14.6m/s.

SEYMOUR & CO. GENERAL RAILROAD

S.AGENCY, Office, Metropolitan Bank Building. No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years
OHIO AND MISSISSIPPI R.R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS, at 11 years.

LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

Notice to Contractors.

PACIFIC RAILROAD OF MISSOURI.
SEALED proposals will be received by the undersigned, at their office in the city of St. Louis, until six o'clock, p. m., of the 15th day of May next, for the Grading, Masonry, etc., of the first division of the South-west Branch of the Pacific Railroad, extending from Franklin Depot, the present terminus of the road, some 40 miles West of St. Louis, to the crossing of the Gasconade River, a distance of about 78 miles. The line will be divided into sections of about one mile each, and proposals may be made for one or more sections. The line, plans, profiles, specifications, form of contract, etc., will be ready for inspection on and after the first day of May next. The work to be let is quite heavy, situated in a healthy country, and is easy of access.

The undersigned reserve to themselves to reject all proposals that are not satisfactory.

March 24th, 1854. **A. S. DIVEN & CO.**

OGDEN & DELAFIELD'S,

Late OGDEN & MARTIN.

Rosendale Cement.

WE are prepared to enter into arrangements for supplying our cement for public works or other purposes. We warrant the cement equal in every respect to any manufactured in this country. It attains a great degree of hardness, sets immediately under water, and is a superior article for masonry coming in contact with water, or requiring great strength.

For sale in tight barrels, well papered, on application at their office, by **OGDEN & DELAFIELD**, 104 Wall st.
 The above cement is used in most of the fortifications building by government.

Pneumatic Pile Driving.**FOUNDATIONS FOR BRIDGES, PIERS &c.**

BY THE PNEUMATIC process hollow cylindrical piles or tubes from eight inches to ten feet diameter can be driven through sand, mud, clay or other material to any required depth. The complete success which has attended the operations of this process shows it to be eminently practicable in, and much the best method known for, the construction of railroad bridges across deep and rapid rivers where permanent foundations of great strength are necessary, and have to be secured at great depth.

Applications for license for the use of the invention in any part of the United States may be made to H. V. POOR, Esq. Editor of the *American Railroad Journal*, 9 Spruce street; or for contracts for pile driving, or licenses as above to **CHARLES PONTEZ**, New York.

March 25th, 1854.

To Contractors.

PACIFIC RAILROAD OF MISSOURI
THIRD AND FOURTH DIVISIONS.

It is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. ALLEN, Pres.

THOS. S. O'SULLIVAN, Chief Eng.

Pacific R. R. Office, St. Louis, Feb. 1854.

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the **Rossie Furnace** for making iron, is believed to be unsurpassed by any charcoal Furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ores—specular red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

Ogdensburg, N. Y., April, 1853.

G. FARISH.
 15.3m*

To Chief Engineers.

A Gentleman who has had some Eight years Experience in the construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass. 17 tf

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of such weight or pattern as may be required.

VOSE, PERKINS & CO.,
9 South William St.

New York, June 1, 1851.

Knox & Shain,

MANUFACTURERS OF
LEVELS, TRANSITS AND SURVEYING
COMPASSES.

No 72 Dock st. first door south of Walnut, west side

PHILADELPHIA.

First Premium awarded by the Franklin Institute.

Stuart, Serrell & Co.,

CIVIL ENGINEERS,

Rooms 22, 24, 26 & 27,

157 Broadway, New York.

CHARLES R. STUART,
DANIEL MARSH,

EDWARD W. SERRELL,
SAMUEL MCLEROY.

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West,
W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
Feb. 18. 1m.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloohah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

**Cast Iron Chilled Slip Tires
for Engine Driving Wheels.**

THE undersigned, principal Agent for the above improvement, offers it, with the right of use, to Railroad Companies and others. The cost of these Tires is less than one-third that of wrought iron, the cost of renewing one-quarter; and the adhesion, strength, and durability equally as great, as will be proved to the satisfaction of any party. Over two hundred locomotives of the heaviest class, (25 to 30 tons,) upon the Baltimore and Ohio Road, are shod with cast iron, with an acknowledged saving over wrought iron equal to \$30,000 per annum. Address
16, L.F.
ZERAH COLBURN, Paterson, N. J.

Railroad Car Works.

THE Undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Head Cars, also Baggage Barrows and Freight Trucks.

F. HUNGERFORD & CO.

Maysville, Ky., Sept. 29, 1853.

Railroad Iron.

1,300 TONS superior quality Yorkshire rails 56 pounds T pattern can be immediately delivered at New York, Savannah, or New Orleans.

For sale by

NAYLOR & CO.

New York, April 1st, 1854.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3½ to 6½ inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc., etc.

T. & E. GEORGE.

Philadelphia, November 14, 1850.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWITT,

17 Burling Slip, New York.

February 15, 1850.

Notice to Contractors.

MEMPHIS & OHIO RAILROAD.

SEALED proposals will be received at the office of the Memphis and Ohio Railroad Company, at Memphis, Tenn., until the 15th day of April next, for the grubbing, clearing, gradation, and masonry of the first 65 miles, from Memphis to Cherryville.

Contractors must give the most undoubted security for the completion of the work at the time, and in the manner specified; and contracts will be let in sections, or for the entire work, as may be deemed best by the Directors.

The Directors reserve the right of rejecting all bids, should none prove satisfactory; and it is desirable that all propositions should be submitted, with the view of preparing the whole work for the iron as soon as possible. Bids of that character and otherwise equally favorable, will have preference.

Maps, plans and specifications may be seen at the office of the company, after the first of April.

E. PEABODY,
Engineer in charge.

Notice To Contractors.

OFFICE OF THE VICKSBURG, SHREVEPORT AND TEXAS RAIL ROAD COMPANY }
Monroe, La., March 8th, 1854.

SEALED PROPOSALS will be received at this Office until the 1st day of June next, at 2 o'clock p. m., for clearing and grading the section of road between the Mississippi river and Richmond, in the parish of Madison—a distance of about twenty miles; also, for clearing and grading the section between the city of Shreveport and the Texas State line, in the parish of Caddo—a distance of about twenty miles; and, also, for clearing and grading a section of twenty mile, beginning at the Ouachita river and running west, in the parish of Ouachita.

Bids may be made for the entire sections, or any portion thereof, not less than one mile, and those proposing to take stock of the Company in part payment, will be most favorably considered. The lines, plans, profiles and quantities of work, together with the specifications, are now ready for examination in the office of the Company. Payments in the proportion of four-fifths of the amounts due will be made at the end of each month or quarter, as may be agreed on, during the progress of the work.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract; or to reject all if none are satisfactory.

Further information may be obtained from the undersigned.

N. D. COLEMAN,
President.

P. J. TOURNADRE,
Chief Engineer.

7c14

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

2d Feb'y.

JOHN H. HICKS,
90 Beaver street.

H. SAWYER.

(of the late firm of SAWYER & HOBBY),
Manufacturer of Transits and Levels,

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by

June 9, 1853.

BOORMAN, JOHNSTON & CO.,
66 Broadway, New York.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to

THOS. CHAMBERS, President,
September, 1850.